EPIGRAPHIA INDICA

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connection with the Chēdi family[1]　It is also noteworthy that sometimes their names end in *varmman*[¹]　From the records noticed above we find that the names of the Śailēndras of Java-Sumatra or Śrīvijaya ended in *varmman*[3]　The name of the Śailēndra ruler given in the Nālandā plate on the other hand ends in *dēva*　This looks rather strange　The name Bāla-putra itself, signifying ' young son ' is curious　This ending of *dēva*, however, occurs only in the prose and formal portion but not in the other or metrical portion, which describes and eulogises these *Śailēndras*　This would go to suggest that the suffix was left out because the metre did not require it, or possibly because it did not form an integral part of the name and would have been replaced by *varmman*, a general suffix or surname of the ruling caste or the Kshatriyas　The name, however, is pure Sanskrit as is the name of Tārā the mother of Bālaputradēva, or Dharmasētu, her father, and would point to emigration from India　Had the names of the two ancestors of Bālaputradēva, that is to say, his father and grandfather, been given, we could be definite in the matter, for, if these names were un-Indian, as in the case of Kundinga, his son Asvavarman and grandson Mūlavarman of Borneo, we could conclude that the Sanskrit names must have been taken after conversion to Hinduism, or rather Buddhism　But in none of the names of the Śailēndras do we find any foreign sound at all, suggesting that they were the natives of the islands originally and came into the fold of Buddhism afterwards.

The names of the Pāla kings and other personages mentioned in the introductory portion of this grant have been dealt with by Kielhorn or other scholars in connection with the contents of the Mungīr copper-plate inscription　So I need not notice them here　But, besides them and the Śailēndras, our record speaks of two more persons and they require special mention　One of them is Dharmasētu whom the inscription describes as a scion of the Lunar race and the father of Bālaputradēva's mother, namely, Tārā　To our regret it does not supply any other particular regarding him and it is hardly possible to identify him or to say

[1] Mr K V Sabrahmanya Ayyar, to whom I am indebted for this information, has kindly given me the following note on the Malaiyamārs —

" Ancient Tamil works mention the names of a number of Malaiyamān chiefs, who might be attributed to the 7th and 8th centuries A D　Some of these are —(1) *Valaiyamān Tirumudikkāri*, (2) *Malaiyamān Śōliya-Ēnādi Tirukannan*, (3) *Malādar-Kōmān Meypporal-Nāyanār* and *Narasinga-Munaiyaraiyar* of Tirumunaippādi　Their capital was Trukoilur, the head quarters of a *taluk* in the South Arcot district and a railway-station in the Kātpādi-Vilappuram section of the South Indian Railway　It is said to have been situated within the Chēdi country

The Malaiyamān chiefs appear to have been rendering help to one or the other of the principal powers of the South, viz, the Chēra, Chōla, Pāndya and the Pallava.　Narasingamunaiyaraiyar was a contemporary of the Śaiva saint Sundara-Mūrti-Nayanār of the 8th century A D　he is counted as one of the canonised 63 Śaiva devotees of the Tamil country　In the account given of No 3, in the Tamil hagiology, *Periyapurānam* figures a Tattan, whose name may be regarded as a variant of Datta.　Besides, one of the poems of the Tamil anthology, *Pattuppāttu* was composed in honour of a certain " Ārya King Piragadattan (Bhriga-Datta) "　It may be noted that the Malaiyamān chiefs belonged to the Bhrigu race as is evidenced by their inscriptions　Epigraphical reference to Narasimhamunaiyaraiyar is found in the Tanjore inscriptions of the Chola King Rājarāja I (A D. 985 1013)　In an early stone record of Rājakēsarivarman found at Tirunāgēsvaram near Kumbakonam, of about the 9th century A D　mention is made of Milādudaiyar-palli

It is interesting to note that the later members of the Malaiyamān family, who figure in numerous stone inscriptions, call themselves invariably Chēdiyarāyas (Chēdirajas) and they are mostly subordinates of the Chōlas of the 10th to the 13th centuries A D　The appellation *Chēdiyarāyan*, assumed by almost all the chiefs, if it is not a mere accident, as it could not be, must indicate that they were the rulers of the Chēdi country　This fact taken with the names like Datta would make one infer a colonisation at some remote past of a branch of the line of Chēdi Kings, in the South Arcot district, where we find them."

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whether he was an Indian king or some ruler in the Far East The name whether it is read as Dharma or Varma-setu appears to be new. The other interesting name occurring in the document is that of Balavarmman the ruler of Vyāghratatī-mandala, who acted as *dūtaka* on behalf of the Magadhan king. As to why he was selected or what special connection he had with the ruler of such a remote island as Sumatra or Java, and whether he had been there or known personally to that king our inscription makes no mention Apparently, there was no direct political relationship between the two; for, we know from the Khalimpur[1] plate of Dharmapāladēva that the Vyāghratatīmandala lay within the *bhukti* of Pundravardhana, which was under the sway of the Pāla king Dharmapāla and, evidently, of Dēvapāladēva after him. Pundravardhana is the same as Paundravardhana—Pundra and Paundra being synonymous—which is the modern Rājshāhi district of Bengal[2]. The use of the word *adhipati* would indicate that in this instance at least the term *mandala* connotes a larger area than *vishaya*, which in the majority of cases seems to include a *mandala*[3]. During the reign of Dēvapāladēva, Vyāghratatī was governed by a distinct ruler called Balavarmman. The way in which he is praised in this epigraph, as the right arm of the Emperor, would show that he had a high rank even though he was one of the feudatories of Dēvapāladēva. As, however, our plate gives no genealogy or particulars about him his personality is very vague. A few homonymous[4] rulers are known to have flourished about that time but they appear to be quite different personages and even their dates will not agree with that of this plate. It looks curious that though the charter mentions the *dūtaka* of the King of Magadha yet it leaves the ambassador or ambassadors of the Javanese King unnamed altogether.

The vague manner in which the inscription describes the rulers of the Far East or Sumatra-Java and their relative king of the lunar race would show that its author did not know much of them. He knew of Bālaputradēva and his mother Tārā. The latter he compared to the goddess of that name It is not improbable that the grant registered in the epigraph was made chiefly at her instance

Our plate mentions several places calling for remarks Out of these, I have already noticed three, namely, *Suvarnnadvīpa*, *Yavabhūmi*, and *Vyāghratatī* Of the remaining ones Nālandā is the most important. The way, in which this record speaks of it, would show that it continued to be as important a centre of Buddhist lore as it was during the time of Hiuen Tsang's visit The spelling of the name given in this document is Nālandā which is the correct way of writing it The same spelling is given in a votive inscription on the image of

[1] *Ep. Ind.*, Vol. IV, pp 243 ff. *J. B R A. S*, LXIII (1894), pp. 39 ff.

[2] Smith *Early History of India*, p. 373, As has already been stated by Cunningham (*A S R.*, Vol. XV, pp. 112 ff.) Kāntāra is another name of Pundra or Paundra, i.e., sugarcane, and the Mahākāntāra of the Allahabad inscription of Samudragupta, the Great, was probably an older name of this province which, about the middle of the fourth century of the Christian era, was governed by a King Vyāghra Thus it does not appear to be improbable that the district of *Vyāghratatī* or the tiger's precipice—unless of course *vyāghra* is taken in the sense of castor oil in which case the word *Vyāghratatī* would be the slope marked or overgrown with castor plants,—was named after this tiger king.

[3] This would rather show that no mistake was made in the text of the Khalimpur grant and that Kielhorn's statement in the *Ep Ind.*, Vol IV, p 253, footnote 3 that it was, will be obviated

[4] For instance we know of a Balavarman, the lord of Prāgjyōtisha (Gauhati or Assam) from the Nowgong copper-plate (Dr. A F. Hoernle, *J. B A. S* LXVI, pp. 285 ff.) and another of Kārūsha or rather Brihadgriha (Kielhorn, *Ind Ant.* Vol. XX, pp 123 ff). On palæographic grounds the former of the two has been assigned to the last quarter of the 10th century or say nearly one century later than the date of Dēvapāladēva. The other is too little known to admit of identification. The third ruler of the name, who will synchronise with our document, was the father of Avantivarman II, who was the feudatory of Mahēndrapāla of Kanauj (cir. 890 A. D), To think of identifying him with the Balavarmman of the Nālandā plate will be altogether unreasonable, for he was the ruler of Kathiawar, or Saurāshtra and a feudatory of the formidable rival of the monarch of Bengal.

Sankarshana which was dug out of the same site[1] and the newly discovered statue of Tārā. It again occurs not only in some Jaina writings but such an old work as the *Dighanikāya*[2]. However, it seems to be noteworthy that none of these works called Nālanda a university but only a prosperous town though Hiuen Tsang describes it as if it were a University. The way in which it is described in our plate would show that it was really a centre of Buddhist learning

As to the remaining place-names mentioned in this document, I think, Śrīnagara or Śrīnagara-bhukti must be identified with modern Patna, which as a district, includes Rājagriha (Rājgir) and, as a division or commissionership, comprises the district of Gayā, even now. It is true that in the Khalimpur grant of Dharmapāladēva, which has been referred to above, the name given for the city is Pāṭaliputra and not Śrīnagara or Nagara, still, I think, there were two designations, the one, *viz.*, Pāṭaliputra, which meant the whole town and the other, *viz.*, Śrīnagara, the main part of it, like the Bankipore of to-day. Nagara means the chief town generally, but in this case it meant *the* town, the prefix *Śrī* implying prosperity or wealth of the town. In other words Pāṭaliputra was the *pattana*[3] and the seat of Government, especially in earlier days during the supremacy of the Mauryas or the Imperial Guptas,[4] lay there, and Śrīnagara was its principal portion where the office of the *bhukti* or division was situated. One was concerned with the whole government but the other only with eight hundred[5] villages coming in its jurisdiction or *bhukti*. Thus Śrīnagara must have been a part of the whole which was termed Pāṭaliputra[6] That, apparently, is the reason why the latter and not the former appellation of the town is to be met with in literature.

That Rājagriha and Gayā are respectively the Rājgir and Gayā of to-day requires no demonstration The latter is a district still, though the former has now dwindled into a ruined town of the Bihār subdivision of Patna.

Regarding the villages which formed the object of the grant or endowment registered in the charter, we are told that Nandivanāka and Manivātaka were situated in the Ajapura-*naya* subdivision, Naṭikā in the Pilipinkā, and Hastigrāma in the Achalā-*naya* or subdivision of the Rājagriha *vishaya* or district, and that Pālāmaka was situated in the Kumudasūtra *vīthi*, a subdivision of the Gayā district If similarity of sound can be depended on, I would propose the following identifications to which proximity of Nālandā will lend a great support The Ajapura ' *naya* ' or subdivision of the inscription may possibly be represented by the Ajaipur[7] village in the Ajai Hisse Chahāram Mauzā in the Bihār Thānā and the two villages Nandivanāka and Manivātaka, granted in it, would be the Nediune or Naunvan and Manianwan villages of these days, which are included in the Bihār Thānā. Pilipinkā I am inclined to identify with the Pilkhi or Pilkee Mauza and the Naṭikā village with the Nai Pokhar of to-day, both lying in the Silāo Thānā. Though I am unable to offer any identification for the ancient Achalā yet, I fancy, the village Hasti or Hastigrāma of the grant might be the Hethoa Bighā village of the Bihār Thānā if not the Hathi Tolā of the Maner Police subdivision The old village directory[8] of the Gayā district available to me does not, apparently, give any name

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[1] See my *Annual Report of the Central Circle*, (Patna), for 1921, p. 5 and *J B B O. R S*, Vol X, pp 30 ff

[2] Vol. I pp. 1 & 211-12

[3] Cf ' मधामसूर्व्व नगरम्'; Bharata quoted in the *Sabdakalpadruma* under Nagara.

[4] Cf. यस्मं यत्र राजधानी स्थिता and नगरसप्तशतग्रामसमध्ये तद्व्यवहारस्थानम् , Yaśōdhara in his *Jayamangalā* on the *Kāmasūtra* of Vātsyāyana (N S. Edition), p 44

[5] Even in the Khalimpur grant the *śrīmajjayaskandhāvāra*, or ' royal camp or headquarters ' lay at Pāṭaliputra. For the meaning of this expression cf. V Smith , *Early History of India*, p 398 and footnote 3.

[6] Similarly, I would identify the *nagara-bhukti* of the legend on the seal, which, Dr Spooner discovered during his explorations of the site (see his *A. P. R.* (*E C*) for 1916-17, p 43) with the Śrīnagara-bhukti of this document

[7] *Village Directory of the Presidency of Bengal*, Vol. XXVI (Patna District)

[8] *Village Directory of the Presidency of Bengal*, Vol. XXVII (Gaya District).

2 x 2

6 ट्टा-

ष्टान्ते सति कृतिनां सुरगझ्नि यस्मिन् श्रद्धेयाः पृथुसगराद्योप्यभूवन् [॥२*॥]
विजित्य येना जलधेर्व्वसुन्दरान्विमोचिता

7 मोघपरिग्रह्व इति ।

सवाप्यसुदाप्यविलोचनाग्पुनर्वनेषु व(ब)भून्दट्टग्र्म्मतझ्जा: ॥[३॥*] चलत्स-
नन्तेषु व(ब)लेषु यस्य विश्वभरा-

8 या निचितं रजोभिः ॥[1]

पादप्रचारच्चममन्तरिच्छम्विचछ्रमानां सुचिरम्व(म्ब)भूत्र ॥[४॥*] यास्तार्थभाजा
चलतोनुमास्य वर्ग्णार्ग्प्रतिष्ठापय-

9 ता खधर्म्में[।*]

श्रीधर्म्मपालेन सुतेन सोभूत्स्वर्गस्थितानामसट्टण: पितृणाम् ॥[५॥*] भवले-
रिव जड्ग्मैर्येदोयैविचलद्भिर्हिरदै: कदर्थ्यमाना ।

10 निरुपप्लवमम्व(म्ब)रं प्रविदे श्ररण्ं रेणुनिमेन भूतधात्रो ॥[६॥*] वेदारि
विधिनोपयुक्तपयसां गंगासमेतेंस्नु(म्बु)धी । गोकर्णार्दिषु चाप्यनुछ्ति-

11 तवतान्तीर्थेषु धर्म्याः क्रियाः [।*]

भूत्यानां सुखमेव यस्य सक्कलानुद्वृत्य दुष्टानिमाग्लोकान्साधयती[ऽ*]नुषझ्ग्जनिता
सिद्धि: परत्रा-

12 प्यभूत ॥[७॥*]

तैस्तैर्दिग्विजयावसानसमये संप्रेषितागां परै: सक्कारैरपनीय खेदमखिलं स्वां
स्वां गतानां भुवम् [।*] कृत्वं भावयतां

13 यदीयसुचितं प्रीत्या नृपाणामभूत्

सोक्कण्ठं ह्दयं दिवस्युतवतां जातिस्मराणामिव ॥[८॥*] श्रीपरव(ब)स्य
दुहितु: चितिपतिना रा-

14 ट्टकूट'तिलकस्य ।

वरणादिव्याः पाणिलेग्टह्दे ग्टछमेधिना तेन ॥[९॥*] छततनुरियं लक्ष्मी:
साचात्चितिनु श्ररीरिणी । किमवनिपते: कौत्तिर्मं-

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[1] Two strokes in place of one.

[2] Symbol for म् at the end of a pāda is peculiar.

[3] Kielhorn has समेता°.

[4] This daṇḍa could be left out.

[5] Kielhorn has तेर् तैर् which cannot be correct.

[6] The way of writing the letter ट is peculiar.
This daṇḍa could be left out.

Page 108 —*Inscription B* —The missing second plate of this inscription has been discovered at Iyāveṛa by Mr D B. Diskalkar, M.A, Curator, Watson Museum of Antiquities, Rajkot, and will shortly be published by him in this journal — Ed

„ 108, f. n 2 —For *upadmānīya* read *upadhmānīya*.

„ 109, l 10 —Dr. Sukthankar is not right in his guess, for the *dūtaka* of the grant as found in the missing plate is Rudradhara. But the writer was Kikkaka, here spelt Kikaka —Ed

„ 109, f n 2.—*For* Dhruvasōna *read* Dhruvasēna

„ 110, l 3 —*For* Rotghamitra *read* Rōtghamitra.

„ „ l. 5 —*For* Āśvina *read* Āśvayuja

„ „ Text l. 7 —*For* -gītan *read* -gītau

„ „ „ 8 —*For* āchchhettā *read* āchchhettā

„ „ „ 9 —To =vvā, *add* the footnote 'Read =vā'.—Ed.

„ „ „ 11 —*For* Kikkakena *read* Kikkakēna

„ „ f n. 2 —For *āgamu* read *āgāmi*

„* 111, l 3 —*For* '34' *read* '33'

„ „ „ 8.—*For* 'these two sets' *read* 'this set'.

„ „ „ 16 —*For* Tirunalūr *read* Tirunālūr.

„ „ „ „ — For °nallūr *read* °nalūr

„ „ „ „ —For 'Sunepuha°-' *read* 'Sunaipuha°-

„ „ „ 17.—*Insert* after 'Nārāyanāmbikā', " or Nāranadēvi-auva "

„ „ „ 11 from the bottom —*For* Tirunalūi *read* Tirunālūi

„ „ „ „ „ „ *For* -°perumā-nallūr *read* °perumā-nalūi

„ „ „ 10 „ „ *For* Sune° *read* Sunai°

„ „ „ 9 „ „ *For* Mēlmuṛi *read* Mēlemuṛi

„ „ „ „ „ „ *For* Mala-nādu *read* Mala-nāḍu

„ „ „ 8 „ „ *Insert* before 'villages', "first three"

„ „ „ 7 „ „ *For* Tiruchchirāppalli *read* Tiruchchirāppalli.

„ „ „ 5 „ „ *Insert* after 'twelve' the following " *harttānas* of food should be supplied, one "

„ „ „ „ „ „ *For* lamps *read* lamp

, „ „ „ , „ *Insert* after 'burned' " one "

„ „ „ „ „ „ *For* garlands *read* garland.

„ „ last line — *For* 1,82 *read* 1,823

„ 112, l 2 —Insert '*tāṉ-payir*' after '*punsey*'

„ „ „ „ For °*ppēṛu*° read °*pperu*°

„ „ „ 3 —Cancel (*taṛi-kaḍamai*)

„ „ „ „ For *ālukku*° read *olukku*°

, „ „ 4 —For *kattigai-arasaram* read *kattige-arasara*

„ „ „ „ For *patai-kānikhai* read *padai-kānike*

„ „ „ 10 —For *Pēr*° read *Pēr*

„ „ „ 11.—Omit the passage from *Ālukku*° to *ntrānikkam* in l 13

„ „ „ 13 —For *Magamai* read *mahamai*

„ „ „ 17 —For *Kattigai-arasaram* read *Kattige-arasara* and *add* in a foot-note [This term does not indicate any tax on firewood as the author suggests but may have to be connected with *kattige-yara*, a mace-bearer or in this case the village servant who carries the staff of office with him —Ed]

―――

*[The following numerous corrections on pp 111 to 117 have been necessitated by the proof being passed by the office in the belief that it had been revised by the author]

Page 112, l 18.—*For* -kkānikkaı *read* kānike

" " " 23 —*For* Tıruchchırāppalli *read* Tıruchchırāpalli

" " " 23 —*For* Tirunalūr *read* Tırunālūr

" " " 24 —*For* Śeranaı° *read* Śeranaı° and *for* °nallūı *read* °nalūı

" " " 24 —*For* Mẹlmurı *read* Mēlēmurı

" " " 24 —*For* Mala-*nādu* *read* Mala-nādu

" " " 24 —*For* Sune° *read* Sunaı°

" " " 26 —*For* Tiruchchırāppalli *read* Tıruchchırāpalli

" " " 29 —*For* Mala-*nādu* *read* Mala nādu

" " " 33 —*For* Tırunalūı *read* Tirunālūr and *insert* after ıt, [-Tıunallūı]

" " " 33 —*For* Śeranaı° *read* Śēranaı°

" " " 34 —*For* °ma-nallūr *read* °mā-nalūr

" " " 35.—*For* Śunepuha° *read* Śunaıpuha°

" " Text, l 1 —Remove the unnecessary extra bracket after नम() and insert a hyphen at the end of the line

" " " 2 —*For* चु *read* चु

" 113 " 3 —*For* सो *read* सैं and cancel foot-note

" " " 6 —*For* °मञुघि° *read* मञूघि°

" " " 8 —*For* °यद्' *read* °यदु°

" " " 14 —*For* °द्वारिहरि° *read* °द्वारी हरि°

" " " 23 —*For* °ञन्म तं° *read* °ञन्मतं°

" " f n. 9 —*For* ञस्तान *read* ञस्तान.

" 114, Text l 29 —*For* मूर्' *read* मर्ँ° and *add* in a footnote "[र̆ ıs the letter ṟ̣ as generally transcribed in Nāgarī,—Ed]"

" " " 31.—*For* °द्वये *read* °न्हये and correct into °ह्ये.

" " " 34 —*For* मासि *read* मासी and correct into मासि

" " " 36 —*Insert* after °[ञ्ये] the letter 'द' and correct °[राज्ये]द into °राज्ये]च.

" " " 37 —Carry the footnote number 14 to 'भो of the preceding word

" " " " —*For* तिह्नलु° *read* तिह्नलु° and correct into तिह्नालू

" " " 38 —Correct in a foot-note °नलुरपि into °नलुरपि Insert space after ड़ॉर and *for* 'कन्या° *read* °कन्य°

" " " 39 —*Insert* "[|| 23*]" after भे an l *add* a foot-note "read न्नामिघे [क्नामिघे] [This word which occurs in connection with Rājagambhīra and Rājaripu, both ın lınes 36 and 38 f, has perhaps to be understood in the sense of the Tamil वळनाडु, a territorial subdivision, as suggested also by its use below, in ll. 52 and 56 f.—Ed]"

" " " " " —*Insert* as a foot-note on प्रञ्जपदि —"[प्रञ्जनदि perhaps stands for माळनाडु which is perhaps a Sanskritised form of Malnādu —Ed]"

" " " " " —*Correct* मुनिपृह्नलुरधा ınto सुन्पृह्नलुर्यो in a foot-note

" " " " " —*Insert* after ञमौ '[ı*]'

" " " 40 —Read श्रीरगरञ्ञगर्पि as one word

" " " 41 —After "||" ınsert [24*]

" " " " —*For* स्वति श्री read स्य श्रि and correct the same into ञति ६ ।...।.

Page 114, Text 1 42 —*Insert* a foot-note on सुघ —"Read गुघ".

"   "   "   " 44 —*For* नारायण° *read* नारय°

"   "   "   " 46 —*For* परि° *read* हरि° and insert spaces after व and ी

"   "   "   " —*For* वगसाल्ि *read* वनमाले

"   "   "   " 47 —*For* तिर° *read* तिरि° and correct into तिर   The letters द्कि को ought to be in [ ]

"   "   f n.   9 —*Add* at the end " [Perhaps प्रकस्याब्दे was meant—Ed] "

"   "   "   13 —*For* मिघकावेर्या *read* मिघे कावेर्या°.

"   "   "   14 —*Cancel* the hyphen at the end and *insert* [|| 22*]

"   "   "   15 —*For* सव्वकन्याया *read* सद्यकन्याया

"   "   " 16 & 17 —[Perhaps metrical considerations would require some corrections like श्रीरंगराट्सपर्यार्यं नारयास्वाभिधानत —Ed]

"   "   "   25.—*For* स्रान्दक् *read* खौदके

" 115, Text 1 51 —*For* सुघ *read* सुघ

"   "   "   " 53 —Correct in a foot-note, °हीमलि° into °हीवलि°

"   "   "   " 54 —*Correct* तिरमालूर *into* तिरनल्लूर

"   "   "   " 55 —*For* नलू *read* नलु and correct into नल्लू°

"   "   "   " 56.—In १४०३ put the nought in square brackets with an asterisk.

"   "   "   " —*For* °कर *read* °करे

"   "   "   " —*For* °वळ° *read* °वल°

"   "   "   57.—*For* सुने° *read* सुने° and correct in a foot-note °नलुर into °नल्लूर

"   "   "   58 —*For* उभय(:) *read* उभत

"   "   "   59 —*Insert* a space after कंद and *add* in a foot-note " [कंद perhaps stands for कण्ड ? c , मेल्कण्ड —Ed]"

"   "   "   64 —*For* यों *read* यो and correct the whole into श्रीळुकुणोय्यांइ in a foot-note

"   "   "   67.—Carry foot-note No. 15 to the end of एनुझता.

"   "   "   71 —*Insert* space after the first letter in the line and correct in a foot-note माच° into आच°.

"   "   f n   4 —Omit मे at the end of the correction

"   "   "   6.—Change the foot-note thus " Read सेरनेवडपेरसानलूर as in the Sanskrit portion in l 37 "

"   "   "   9 —*For* स्रान्दके *read* श्रोन्दके

"   "   "   14 —*For* पच्च *read* पच्चे

"   "   "   15 —*For* हीसवरि *read* एनुहृधा

" 116, Text 1 75 —*For* 22 *read* 25 and *for* खटसा *read* खादत्ता and correct into स्रदत्ता

"   "   "   " 76 —*For* पटिवर्घ° *read* पटिवर्घुं° and correct into परिं वर्घ°

"   "   "   " 77 —*For* 23 *read* 26

"   "   "   " 79 —*For* 24 *read* 27

"   "   "   " 80.—*For* दत्ता° *read* दत्ता and correct into दत्ता°

"   "   "   " 82 —*For* °या° *read* °भ्रा°

"   "   "   " —*For* 26 *read* 29

"   "   "   " 83 —*For* °विट° *read* °विट °and correct into °विट्र°

"   "   Vv   6 7 —*For* kaustabha *read* kaustubha

"   "   "   10 12, last sentence —*For* °Lakshmi *read* -Sri and *for* as *read* the

Page 116, line 3 from the bottom —*For* Śēra°- *read* Sēra°

                                   —*For* Śune° *read* Sunai°.

     ,,   last line —*For* Monday *read* Sunday.

     ,,   f n 3 —Insert 'and' *before* इत्यादि

     ,,   ,,   6 —*Insert* का *before* हि

     ,,   ,,   7 —*Insert* दत्ताप *before* द्वादश

     ,,   ,,   8 —*Cancel* °पद्वादश

     ,,   117, l 3 —*For* Śēranaibenda-° *read* Seranaiband i-°

     ,,   ,,   ,, 4 —*For* Trisnāppalli *read* Tiruchchnāpalli.

     ,,   ,,   ,, 6 —*Insert* Sahyakanyā *before* Kāvēri and put the latter in round brackets and *add* "in the Pravridjanapada i o, in the Mala-nādu district"

     ,,   ,,   para 2, l 3 —*Insert* at the end of the line "sacred food, of one "

     ,,   ,,   ,,   ,, ,, 4 —*For* lamps *read* lamp and *insert* 'one' after the comma

     ,,   ,,   ,,   ,, ,, 4 —*For* garlands *read* garland

     ,,   ,,   ,,   ,, ,, 5 —*For* Nārāyana° *read* Nārana°

     ,,   ,,   ,,   ,, ,, 5 —*Insert* after Pāndimangalam "with its hamlets"

     ,,   ,,   ,,   ,, ,, 6 —*For* Śune° *read* Sunai°

     ,,   ,,   ,,   ,, ,, 11 —*For* Chirichiāpalli *read* Tiruchchnāpalli.

     ,,   ,,   ,,   ,, ,, 11 —*For* Sune° *read* Sunai°.

     ,,   ,,   ,,   ,, ,, 12 —*For* Mēlamuri *read* Mēlemuri

     ,,   ,,   ,,   ,, ,, 12 —Mala *read* Mala.

     ,,   ,,   ,,   ,, ,, 17 —*Cancel* tanikkadamai at the end of the line.

     ,,   ,,   ,,   ,, ,, 18 —*For* ālukkunipāttam, *read* olukkunirpāttam

     ,,   ,,   ,,   ,, ,, 18 —*For* verses 22-26 *read* verses 25-29

     ,,   118, text lls 5 & 6 —I would add a hyphen at the end of l. 5 and take *mahōdaya—mahīdharēndra* as one word, thus altering the sense The chief who is described was a Sun on the Lord of mountains, *viz*, the great eminence of the Kadamba family.—Ed.

     ,,   130, l 40, *for* XIV *read* XVI.

     ,,   150,   coll 6-7 for *Śōchana* read *Śōbhana*

     ,,   189, ,, 29, *for* nāme *read* name

     ,,   191, f n 3, *for* the letter व after य (?) *read* न after नृत्त

     ,,   ,,   ,,   ,, 12, *insert* length after °ञ°

     ,,   193, l 22, *for* Tōramāna *read* Tōramāna

     ,,   194, para 5, l 4, *for* Karnāta *read* Karnāta

     ,,   196, ,,   2, ,, 13, for *Śiddhaladēvī* *read* Śiddaladēvī

     ,,   ,,   ,,   3, ,, 2, *for* Kārttiga *read* Kārttika

     ,,   197, ,,   1, ,, 2, *for* Hastināvati- *read* Hastināvati-

     ,,   ,,   ,,   3, ,, 1, *for* Durga-Bhatta *read* Durgā-Bhatta.

     ,,   ,,   f. n. 4, *for* °रु° *read* °रि°.

Page 198, text l 12, *for* सगम. *read* सगम

„ 200, f n 8 *for* यात्र *read* यात्र , *for* see above, note 1 *read* see above, note 7.

„ 203, trans of v 9 *for* Udaiya- *read* Udaya-

„ 204 l. 8, *for* kēre *read* kere.

„ „ l 21, *delete* who received.

„ 291, 4th line from the bottom, *insert* the word " *after* " after " and " in brackets

„ 292, l 5, *for* kkolīya read kholīya.

„ 293, l 27, *omit* n of Kalabhran

„ „ f n 4, last line *for* Sadaiyan *read* Śadaiyan

„ 294, l 35, *insert* after orator " thus making it clear that Mangalaraja Madhuratara is identical with Madavikalan Mārangāri mentioned in the previous paragraph ".

„ „ l 38, *insert* after certain " Śuttakēśari-pPerumpanaikkāran The document was signed by " , and after Perumbanaikkāran " who seems to be identical with the engraver Śuttakēśari-pPerumbanaikkāran "

„ 295, l 10, *for* Kadungōn *read* Kadungōn

„ „ l 22, *for* Maduratara *read* Madhuratara

„ „ l 27, *for* grove *read* drove.

„ „ f n , *for* *Epigraphia Indica* read *S I I., Vol. III, Pt IV*

„ 296, l 2, *for* inscriptions *read* inscription

„ 297, l 29, *for* Malava *read* Malaya

„ „ l 33, *for* Kurumadai *read* Kurumadai

„ „ f. n 3, *for* °-Valanādu *read* °-valanādu.

„ 308, l 15, *insert* " (P) " *after* Kurumbunādu.

„ „ l 36, *for* Kulandevan *read* Kulandaivan

„ 309, l 6, *for* race *read* people and *omit* °ttavar of Karavandapurattavar

„ „ trans of v 19, *remove* the brackets of (*learned*) and *use* roman type

„ „ trans. of l 152, *for* °-pPerumbānaikkāran *read* °-pPerumbanaikkāran.

„ „ f n 1, *for* Pāndya *read* Pāndya

„ 311, l 11, *omit* ' made through an ambassador,'

„ „ l 17, *for* Rajagriha *read* Rājagriha.

„ „ para 2, 4th line from end, *for* Kalāsan *read* Kalasan.

, 312, l 11, from end, *for* Prambanam *read* Prambanan

„ 313, l 6, *for* extending *read* governing

„ „ l 6, from bottom, *for* a *dūtaka* or ambassador read *dūtas* or ambassadors

„ „ f n 5, *for* Sailēndras *read* Śailēndras.

„ 314, l 7, *for* Kalāsan *read* Kalasan

„ 315, l. 14, *for* Kundinga *read* Kundinga

„ 317, l. 26, *insert* -raja *after* Pilipinkā

„ 317, f. n 6, *after* ' document' at the end, *add* " That Nagara by itself was used as a synonym of Kusumapura or Pāṭaliputra is evidenced by the *Dhūrtavi-ṭasamvāda* of Iśvaradatta (pp 3 f) published in the Chaturbhāṇi in 1922 by Mr M Ramakrishna Kavi, M A , Teacher's College, Rajahmundry

Page 320, text l. 24, *for* °समावासि° *read* °समावासित°

" 321, f n. 2, *for uparik, read uparika*

, 323, text l. 57, *for* °तौल्यमं° *read* तौल्यांमं°, *for* ग्रनक° one should expect ग्रनकं: or the poet might have used ग्रनक as a derivative of ग्रन treating it as a stem like नौचक from नौच, and *for* °ः° *read* °ः°.

" 324, f n 1, *for* Sakti *read* Śakti (twice)

" 325 l 9, *for -mahishydhikrita read -mahishyadhikrita.*

.. " l 13, *for* Brahmanōttaras, *read* Brāhmaṇōttaras

" " l 14, *for Chāndālas read* Chandālas.

" 32? l. 18, *for -Hiranyagarbha- read -Hiranyagarbha-.*

" " l 28 beginning, *for* gf *read* of

" 335, l. 13, *for* Guddādi- *read* Guddādi.

'

EPIGRAPHIA INDICA

VOLUME XVII

No 1 —GUDIMALLAM PLATES OF THE BANA KING VIKRAMADITYA II

By Professor E Hultzsch, Ph.D , Halle (Saale)

These plates were found at Gudimallam in the Kālahasti Zamīndārī, and were forwarded to Rao Bahadur H Krishna Sastri by Mr K Raghaviah of Kālahasti The they have been acquired for the Government Central Museum, Madras

The copper-plates are five in number and have nine faces of writing, the outer side of the first plate being left blank The plates are not raised into rims for the protection of the writing, which is, however, in good preservation They measure $7\frac{1}{4}''$ in length and $3\frac{1}{3}''$ in breadth, and are strung on a copper ring, which measures about $2\frac{1}{4}''$ in diameter, and the two ends of which are fixed in a circular seal The hole through which the ring is passed was enlarged after the inscription had been already engraved This led to the total or partial destruction of some letters, a few of which were subsequently engraved a second time below the ring-hole The seal bears, in relief, the figure of a bull couchant, facing the proper right, and above it what looks like a lamp-stand and a crescent. The weight of the plates with ring and seal is 133 *tólās*

The alphabet is old Grantha (ll 1-53) and old Tamil (l 53 f) In the Grantha portion the superscribed *i* is not always distinguished from *i*, nor the subscribed form of *ri* from that of *r* Final forms of *m* occur in lines 3, 7, 35, 48, 49, 53 In -*dhrik* (l 30), *chēt* (l. 37), and °*vān* (ll 26, 29, 47) the Virāma is expressed by a small dash at the right of the final consonant

The Grantha portion consists of Sanskrit prose (ll 1, 14, 33, 37-47, 51-53) and of 22 verses in the Anushtubh and Āryā metres. Both the language and the metre of some of the Āryā verses are incorrect In the footnotes on the text I have suggested a few possible emendations, but am unable to furnish a fully satisfactory text and translation of the eight opening verses, which are addressed to Śiva The remainder of the inscription is quite intelligible, but the wording of it is not always correct The compounds -*nām-ākhya* (l. 23), -*ākhya-nāmaka* (l 35), and *kidrig-vidha* (l 37) are tautological In lines 37-39 the author violates the rules of composition by comparing words in the dative plural to nominatives singular, cf. *Sāhityadarpana*, Translation, p 301,] In line 50 the neuter *yuga* is used as a masculine, and in line 53 the neuter *likhitam* forms the predicate of the feminine *prašastih* (l 52) The record ends with a short postscript in the Tamil language

As regards orthography, *au* is expressed by *ō* in =*sō* (l 10) and *mōli* (l 12) The group *ksh* is replaced throughout by *tsh*, *dm* by *tm* in *patma* (ll 4, 37), *dh* by *th*· in *narāthipa* (l 24), and perhaps *ddh* by *tth* in lines 5 10, 11. The lingual *l* is used in *gala* (l. 2) The

A

rules of Sandhi are neglected in *Nandivarmmā iti* (l 19), *nriparāt=bhuja-* and *prādāt-grāman=* (l 34), *chēt* (l 37), and °*bhyah* (ll 39, 42 (twice), 52) In -*nipunahsh=shadgunē* (l 30) and in four other cases (ll 38, 40, 41 (twice)) final Visarga is expressed both by its original form and by a sibilant Consonants are doubled throughout after *r*, and before *y* and *r* in -*maddhyi* (l 2), -*viddhyud-* (l 3), -*viddrā(ddru)ma-* (l 3), -*māttras=* (l 5), *Ruddrō* (l 9), *Girittrēna* (l 33), and *pittrē* (l 35), but not in *traividya* (l 41), *tsha(ksha)tra* (l 23), *putrēna* (l 32), *vēda-traya* (l 39), and *vikrama* (passim) The superscribed *r* of double consonants is often omitted through carelessness

After lengthy invocations of Śiva, which have already been noticed in the preceding remarks the inscription introduces the demon king **Bali** (v 9), who is stated to have been the son of Virōchana, and to have granted the earth at a sacrifice to Krishna (*i e* to Vishnu in his incarnation as a dwarf) One of Bali's descendants was king **Nandivarman** (v 10 f) His son was **Vijayāditya** (v 12), his son **Malla-dēva of the Bāna race** (v 13), his son **Jayamēru** (v 14) *alias* **Vikramāditya** (v 15), his son **Vijayāditya** (vv 16, 20, and l 44) *alias* **Prabhumēru** (vv 17, 21), and his son **Vikramāditya** (v 20 and l 44) or **Vikramādityavarman** (v 18)

According to verse 19 a king named **Nanda**[1] (who may be meant for the Nandivarman of verse 10 f) had granted to Brāhmanas the village called **Viprapītha** With the sanction of his father (v 20 and l 45) Vijayāditya's son Vikramāditya granted protection (*raksha*), *i e* a confirmation of the former grant, to the Brāhmanas of this village (l 45), because he had obtained a boon from the god of the **Parasurāmēśvara** temple (l 43) In verse 21 f the donor, Prabhumēru's son, requests future kings to protect his grant Lines 50-53 record the names of the composer and of the writer of this eulogy (*praśasti*) A postscript in Tamil states that the revenue assessment (*puram*) of the village amounted to 500 *kādi* of paddy and 10 (*kalañju* of) gold (l 53 f)

Before discussing the historical information which is supplied by this inscription, I may state that Viprapītha (v 19 and l 45) is clearly a Sanskrit equivalent of **Tiruvippirambēdu**, the ancient name of **Gudimallam**,[2] where the temple of Parasurāmēśvara (l 43) exists to the present day

When my late friend Venkayya wrote his learned article on five Bāna inscriptions at Gudimallam, which was destined to remain his last contribution to the *Epigraphia Indica* (above, Vol XI, pp 222 ff), no other genealogical inscription of the Bāna dynasty was available but the Udayēndiram plates published by Kielhorn (above, Vol III, p 74 ff) From the new plates we now learn that the king Prabhumēru of the Udayēndiram plates had also the name Vijayāditya, and that his father, who is called Bānavidyādhara in the Udayēndiram plates, had the two additional names Vikramāditya and Jayamēru These fresh facts may be used for locating in the genealogical tree a few Bāna kings who are referred to in other inscriptions A *viragal* which was published by Mr Rice[3] belongs to the reign of Vikramāditya-Jayamēru *alias* Bānavijyā(dyā)dhara, and mentions a military commander Prabhumēru who may be identified with his son and successor Vijayāditya-Prabhumēru Inscriptions both of Vikramāditya-Jayamēru *alias* Bānavidyādhara and of Vijayāditya-Prabhumēru exist also

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[1] An early Rāshtrakūta king Nandarāja is supposed to be mentioned in the Multāi plates of Śaka 631 (*Ind Ant*, Vol XVIII, p 234), but the actual reading of the plate (l 9) seems to be नन्द्रराज In the Tiwarkhēd plates of the same king (above, Vol XI, p 279) the reading is distinctly नन्नराज The genealogy of this Nannarāja is the same as in the Multāi plates of Śaka 631, but the date of the Tiwarkhēd plates is Śaka 553, which would mean that Nannarāja reigned at least 78 years (?)

[2] See Venkayya's remarks, above, Vol XI, p. 222

[3] *Ind Ant*, Vol X, p 39, No II, and *Ep Carn*, Vol. X, Śrinivāspur Tāluk, No. 6

in the Punganūr Zamīndārī of the North Arcot District[1]. One of Venkayya's Gudimallam inscriptions[2] contains a Śaka date—820—which must be assigned to the reign of Vijayāditya-Prabhumēru, because it calls the Bāna king Vijayāditya, to whose reign it belongs, the son of a queen of Bāṇavidyādhara, i e of Vikramāditya-Jayamēru. Another queen of Bāṇavidyādhara, named **Kundavvai**, was the daughter of **Pratipati-Araiyar**, i e of the Ganga king Pṛithivīpati I,[3] who was a contemporary of the Rāshṭrakūṭa king Amōghavarsha I[4] and of the Pāndya king Varaguna.[5] Two further inscriptions of Vijayāditya (Prabhumēru) furnish the Śaka dates 827 and 831.[6]

According to the Udayēndiram plates, Prabhumēru's great-grandson, **Vikramāditya-Vijayabāhu,** was a friend of **Krishna-Rāja,** who used to be identified with the Rāshṭrakūṭa king Krishna II (about A D 900). This identification cannot be upheld, because we have now for Prabhumēru Śaka dates ranging about A D 900, but Vijayabāhu's friend Krishna-Rāja must have been the Rāshṭrakūṭa king **Krishna III** (about A D 950), of whom we know from other sources that he made and held extensive conquests in the South. The Ganga prince **Pṛithivī-pati II Hastimalla,** who received the title *Bānādhirāja* from the Chōla king **Parāntaka I,**[7] and whose inscriptions are dated in the 9th and 15th years of the same king[8] (i e A D 915 and 921), would thus have been a temporary usurper and a predecessor of Vikramāditya-Vijayabāhu. He was the Chōla king's candidate for the Bāna throne, while the legitimate ruler Vijayabāhu was the *protégé* of the Rāshṭrakūṭa invader. To facilitate reference, I subjoin a tabular statement of the two Bāna genealogies

Gudimallam plates	Udayēndiram plates	REMARKS
Nandivarman	Jaya-Nandivarman	
Vijayāditya (I).	Vijayāditya (I)	
Malla-dēva	Malla-dēva	
Vikramāditya (I) Jayamēru	Bānavidyādhara	Son-in-law of the Ganga Pṛithivīpati I, who was an adversary of the Pāndya Varaguna and of the Rāshṭrakūṭa Amōghavarsha I
Vijayāditya (II) Prabhumēru	Prabhumēru	Inscriptions dated in Śaka 820, 827, 831
Vikramāditya (II) (heir-apparent)	Vikramāditya (II)	
	Vijayāditya (III) Pugalvippavarganda	
	Vikramāditya (III) Vijayabāhu	Friend of the Rāshṭrakūṭa Krishna III

[1] See above, Vol. XI, p 285   [2] *Ibid*, pp 227 f
[3] In his Annual Report for 1908-09, p 13, Mr R Narasimhachar has suggested that the actual name of this chief may have been Dindika
[4] *South-Ind Inscr*, Vol III, Nos 47 and 48   [5] See above, Vol IX, p. 87.
[6] Above, Vol XI, p 228, and *Ep. Carn.*, Vol X, Mulbāgal Tāluk, No 229
[7] Above, Vol IV, p 225, verse 5   [8] *Ibid*, p 224, and *South-Ind. Inscr.* Vol II, p 389

rules of Sandhı are neglected ın *Nandıvarmmā ıtı* (l 19), *nrıparāt=bhuja-* and *prādāt=grāman=* (l 34), *chēt* (l 37), and °*bhyaḥ* (ll 39, 42 (twıce), 52) In -*nıpuṇaḥsh=shadguṇē* (l 30) and ın four other cases (ll 38, 40, 41 (twıce)) final Vısarga ıs expressed both by ıts orıginal form and by a sıbılant Consonants are doubled throughout after *r*, and before *y* and *r* ın -*maddhyē* (l 2), -*vıddhyud-* (l 3), -*vıddrā(ddru)ma-* (l 3), -*māttraṣ=* (l 5), *Ruddrō* (l 9), *Gırıttrēna* (l 33), and *pıttrē* (l 35), but not ın *traıvıdya* (l 41), *tsha(ksha)tra* (l 23), *putrēna* (l 32), *vēda-traya* (l 39), and *vıkrama* (passım) The superscrıbed *r* of double consonants ıs often omıtted through carelessness

After lengthy ınvocatıons of Śıva, whıch have already been notıced ın the precedıng remarks the ınscrıption ıntroduces the demon kıng Balı (v 9), who ıs stated to have been the son of Vırōchana, and to have granted the earth at a sacrıfice to Krıshna (ı e to Vıshnu ın hıs ıncarnatıon as a dwarf) One of Balı's descendants was kıng Nandıvarman (v 10 f.) Hıs son was Vıjayādıtya (v 12), hıs son Malla-dēva of the Bāna race (v 13), hıs son Jayamēru (v 14) alıas Vıkramādıtya (v 15), hıs son Vıjayādıtya (vv 16, 20, and l 44) alıas Prabhumēru (vv 17, 21), and hıs son Vıkramādıtya (v 20 and l 44) or Vıkramādıtyavarman (v 18)

According to verse 19 a kıng named Nanda[1] (who may be meant for the Nandıvarman of verse 10 f) had granted to Brāhmanas the vıllage called Vıprapītha With the sanctıon of hıs father (v 20 and l 45) Vıjayādıtya's son Vıkramādıtya granted protectıon (*raksha*), ı e a confirmatıon of the former grant, to the Brāhmanas of thıs vıllage (l 45), because he had obtaıned a boon from the god of the Parasurāmēśvara temple (l 43) In verse 21 f the donor, Prabhumēru's son, requests future kıngs to protect hıs grant Lınes 50-53 record the names of the composer and of the wrıter of thıs eulogy (*prasastı*) A postscrıpt ın Tamıl states that the revenue assessment (*puram*) of the vıllage amounted to 500 *kādı* of paddy and 10 (*kaḷañju* of) gold (l 53 f)

Before dıscussıng the hıstorıcal ınformatıon whıch ıs supplıed by thıs ınscrıption, I may state that Vıprapītha (v 19 and l 45) ıs clearly a Sanskrıt equıvalent of Tıruvıppırambēdu, the ancıent name of Gudımallam,[2] where the temple of Parasurāmēśvara (l 43) exısts to the present day

When my late frıend Venkayya wrote hıs learned artıcle on five Bāna ınscrıptions at Gudımallam, whıch was destıned to remaın hıs last contrıbution to the *Epıgraphıa Indıca* (above, Vol XI, pp 222 ff), no other genealogıcal ınscrıption of the Bāna dynasty was avaılable but the Udayēndıram plates publıshed by Kıelhorn (above, Vol III, p 74 ff) From the new plates we now learn that the kıng Prabhumēru of the Udayēndıram plates had also the name Vıjayādıtya, and that hıs father, who ıs called Bānavıdyādhara ın the Udayēndıram plates, had the two addıtıonal names Vıkramādıtya and Jayamēru These fresh facts may be used for locatıng ın the genealogıcal tree a few Bāna kıngs who are referred to ın other ınscrıptions A *vıragal* whıch was publıshed by Mr Rıce[3] belongs to the reıgn of Vıkramādıtya-Jayamēru alıas Bānavıjyā(dyā)dhara, and mentıons a mılıtary commander Prabhumēru who may be ıdentıfied wıth hıs son and successor Vıjayādıtya-Prabhumēru. Inscrıptions both of Vıkramādıtya-Jayamēru alıas Bānavıdyādhara and of Vıjayādıtya-Prabhumēru exıst also

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[1] An early Rāshtrakūta kıng Nandarāja ıs supposed to be mentıoned ın the Multāı plates of Śaka 631 (*Ind Ant*, Vol XVIII, p 234), but the actual readıng of the plate (l 9) seems to be नब्राज In the Tıwarkhēd plates of the same kıng (above, Vol XI, p 279) the readıng ıs dıstınctly नब्नाज The genealogy of thıs Nannrāja ıs the same as ın the Multāı plates of Śaka 631, but the date of the Tıwarkhēd plates ıs Śaka 553, whıch would mean that Nannarāja reıgned at least 78 years (!)

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[3] *Ind Ant*, Vol X, p 39, No II, and *Ep Carn.*, Vol X, Śrīnıvāspur Tālук, No 6.

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	Vikramāditya (III) Vijayabāhu	Friend of the Rāshtrakūta Krishna III

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[1] See above, Vol XI, p 235   [2] *Ibid*, pp 227 f
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[6] Above, Vol XI, p 228, and *Ep Carn*, Vol. X, Mulbāgal Tāluk, No 229
[7] Above, Vol IV, p 225, verse 5   [8] *Ibid.*, p 224, and *South-Ind. Inscr.*, Vol II, p 389

TEXT.[1]

First Plate, Second Side

1 Namaś=Śivāya svasti ‖ Jayati sa sarvva-vyāpi yat-krita-pi-
2 rimaddha-kandharā-maddhyē [l*] gala-bhūshan-āhi-[2]pratibimbkam-iva su-
3 ra-dahana-risham ‖ [1*] Jayati hutāśana-viddyud-viddrā(ddru)ma-samghāta-ni-
4 bha-jatā-bhāraḥ [l*] yach-chhirasi mani-jatā-[bh]ā-rakta-sarit-pātma(dma)-māl-ē-
5 va ‖ [2*] Jayati pranavapyātthō[3] lēkhā-māttraś=śikhā-sasi yasya [l*] dri-
6 dha-nahana-khinna-vishadhara-van-ānala-dagdha iva latsbyah(kshyah) ‖ [3*]

Second Plate, First Side

7 Jayaty=abdhara-samkāśa-kandharañ=ch-āhi-kundalam [l*] lalāt-ētsha(ksha)nam-Ākā..i.-
8 .[i]n-mālā-dharam vapuḥ ‖ [4*] Jayati vrish-ēśō dēvō lalāta-nayan-āgni-
9 nirva(pa)tit-Ānamgaḥ [l*] asura-pur-āri(rī) Ruddrō jagad-udaya-layamkarō bhīmaḥ ‖ [5*]
10 Jayati sa-nād-ātthō=śō[4] śakti-dvaya-[5]gun-ākarō vibhu-
11 ś=Śambhuḥ [l] samvrita-mantr-aïtth-aïtthaś=[6]śabd-ādi-gunair=anupalabhyah ‖ [6*]
12 Jayati jatā-dhara-mō(mau)li =Mmandākinī-pūrita-[7]mahā-makut-ēśaḥ [l*] Śi(Gi)-
13 ritanay-ārppita-bhāgō guna . rahitō[8] vibhu[r*]=vvyāpih(pī) ‖ [7*]

Second Plate, Second Side

14 Namaś=Śivāya svasti(sti) śii [‖*] Jayati sa Kām-āmga-dahanō[9]
15 mastaka-nyasta-mugdh-ēnduḥ [l*] k-ādi(di)-trin-āntasy=ēśō[10] gupty-u-
16 tpatti-laya-hētuḥ [‖] [8*] Bali[r*]=Vvairōchanō[11] nāma Dāna-
17 v-ēndrō mahā-balaḥ [l*] prādāt=sa gām=makha-vare Krishnāy=āmi-
18 ta-tējasēḥ[12] [‖] [9*] Tasy=ānvayē samu[d]bhūtah prithivi(vī)pāla-sa-
19 ttamaḥ [l*] Nandivarmm[ā] iti[13] khyātaḥ praśamsita-mahā-balaḥ ‖ [10*]

Third Plate, First Side

20 Jayati[14] sa Nandiva[r]mmā narapati-mani-makuta-li(li)dha-pāda-
21 yugaḥ [l] tēna nirākrita-kalinā samprati rājanvati(tī) prithi-
22 vi[h][15] ‖ [11*] Tasya sūnur =mmahā-viro vēlā-paryyanta-dīpakaḥ [l*] Vi-
23 jayādityа-nām-ākhyō dharmma-tsha(ksha)trabhritām varaḥ ‖ [12*] Tasy=ābhava-
24 n=mahā-bāhur=Mmalla-dēvō narāthi(dhi)paḥ [l*] Bāna-vamśasya tilaka-
25 s=samasta-vasudh-ādhipaḥ [‖] [13*] Tasya jajñē mahā-śūrō Ja-

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[1] From two sets of ink-impressions supplied by Rao Bahadur H Krishna Sastri
[2] For the sake of the metre, a word like *bhōga* may have to be inserted after -*āhi*-
[3] Read perhaps *pranavasy=ārddhō*
[4] Read perhaps °*dā rddhō*[or *rttho* ?—F W T]=*sau*
[5] For the sake of the metre, *śakty arddha*- may have to be read   [6] Read perhaps -*ārddhaś*=
[7] For the sake of the metre, -*pūrita* may have to be replaced by its synonym -*bhrita*- [and perhaps *makut-ēśah* is for *makutah*   But the scansion seems too irregular in many places.—F. W T]
[8] Read perhaps *gunatva-rahitō* [or *guna-gana*, since *gunatra* is found only in *gunas* ?—F W T].
[9] The metre is wrong here
[10] For the sake of the metre, *yō* may have to be inserted here
[11] The second half of the ō of °*nō* is very faintly seen
[12] Cancel the Visarga
[13] The correct Sandhi °*varmm=ēti* is precluded by the metre
[14] Read *Vijayati* on account of the metre
[15] Cancel the Visarga

Gudimallam Plates of the Bana king Vikramaditya II

iv b

v a

v b

SCALE THREE-FIFTHS

Third Plate, Second Side

26 yamēruḥ pratāpavān [|*] samasta-rīpu-chakrānām=bhētt=āchintya-pa-
27 rākramaḥ || [14*] Samasta-dharanīpāla-kirīt-āmkita-śāsanaḥ [|*] sa jīyāt=shi(kshi)-
28 tipāl-ēndrŏ Vikramāditya-bhūpatiḥ || [15*] Vikramāditya-bhūpasya sū-
29 [n]uḥ parama-vīryyavān [|*] dŏr-ddaṇḍ-ŏddhṛta-sṛisht-āri =¹Vvijayāditya-
30 nāma-dhṛikh² || [16*] Pañchāmga-mantra-nipuṇahsh=²shadguṇŏ sakta-chinta-
31 kaḥ [|*] nay-ŏpayukta-sachivaḥ Prabhumērur=mmahā-yaśāh || [17*]
32 Tasya putrēna mahatā Vikramādityava[r]mmanā [|*] prasādita-

Fourth Plate, First Side

33 Girittrēna dhvasta-duḥkhēna dhimatā [|| 18*] Api cha³ [||*] Nandŏ nāma mahā-sa-
34 tvŏ(ttvŏ) nṛipa-rāt=⁴bhuja-vikramaḥ [|*] prādāt=⁵grāman=dvij-ōndrānām Vi-
35 prapīth-ākhya-nāmakamh⁶ || [19*] Tasya prādāt=sa ratshā(kshā)n=tu pittiŏ vijñā-
36 [pya] saḥ⁷ prabhuḥ [|*] Vijayāditya-sūnus=sŏ⁸ Vikramādityaśśrātaḥ⁹ [|| 20*]
37 Ki(kī)drig-vidhēbhyŏ ratshā(kshā)n=dattavān=iti chēt(d=) Brahm=ēva patm(dm)-āspa-
38 dēbhyŏ ˙Nārāyana iva bbhrita-sach-chakrēbhyahś=¹⁰Śiva iva sita-bhūti-
39 priyēbhya[h*] Kumāra iva Śiv-āmk-āśrayēbhyah(bhyŏ) vēda-tray-ādhya-

Fourth Plate, Second Side

40 yana-mukhara-mukhēbhyahs=¹⁰sushthu-kṛit-ānushthāna-Paramŏshthi-
41 charitēbhyahs=¹⁰traividya-vriddhēbhyahs=¹⁰samasta-śāstra-pā-
42 ragēbhyah(bhyŏ) brahmadŏy-ānusantānēbhyah(bhyŏ) dharmma-vi[d*]bhyŏ=
43 [v]ichchhinna-sŏmapīthēbhyah [||*] Paraśurāmēśvara-bhattāra-
44 ka-var-āvāpti-nimittād=Vijayāditya-sūnu[ḥ*]=Vvikramāditya-
45 s=sva-pitu[ḥ*]=nniyŏgād=Viprapīth-ākhya-nivāsinān=dvi-
46 j-ēndrānam samasta-[pa]rīḥāra-samanvitām ratshā(kshā)n=datta-

Fifth Plate, First Side

47 vān || Sa[r*]vvāms=tu prithivīpālān=bhāvinah prā[r*]tthaya-
48 ty=ayam [|*] Prabhumērŏs=suta[h*] śrīmān=ari-marddana-karmma-krita¹¹ [||] [21*]
49 Yŏ tu ratshā(kshā)m=imām=pānti vipr-ēndrēshu sama[r*]ppitām [|*] tē-
50 [sh]ām=pāda-yugā mūnni(rdhni)¹² tishthantu mama sa[ḥ*]vvadā || [22*] Śiva-bhattā-
51 raka-sūnŏś=Śivatamasy=cyam kritih [||*] Svasti gŏ-brā-
52 hmaṇēbhyah(bhyŏ) namah || Iyam=praśasti[h] Parahit-āchā-
53 riṇā likhitam[h](tā) || A[yu]nuru=¹³kkādi nellu[m] pat-

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¹ Read -dṛipt-ārir= [Read तृष ?—F W T]   ² Cancel the Visarga
³ These two words are entered below the line, and the place at which they have to be inserted is marked by a cross or caret (kākapada), cf Sir Aurel Stein's Translation of the Rājatarangiṇī, IV, 117 and note
⁴ Read rād=   ⁵ Read prādād=
⁶ Cancel the Visarga
⁷ The syllable sa is entered below the line, read perhaps sat-prabhuh
⁸ Read perhaps sūnur=yyŏ   ⁹ Read perhaps stya tifīutah.
¹⁰ Cancel the Visarga   ¹¹ Read -krit
¹² After this word the syllable ha is written below the line.   ¹³ Read arinūru=.

Fifth Plate, Second Side.

54 tu ponnum idin puravu [||*]

TRANSLATION.

(Line 1) Obeisance to Śiva ! Hail !

[Verses 1-7 are addressed to Śiva]

(Line 14) Obeisance to Śiva ! Hail ! Prosperity !

[Verse 8 is again addressed to Śiva]

(Verse 9) (There was) a powerful lord of demons (*Dānava*), Bali by name, the son of Virōchana   He presented at an excellent sacrifice the earth to Krishna of immeasurable lustre [1]

(Verse 10) In his lineage was born the best of kings, called Nandivarman, whose great power was praised.

(Verse 11) Victorious is that Nandivarman, whose pair of feet was kissed by the diadems, (set) with jewels, of princes.   Through him, who drove away (the sins of) the Kali (age), the earth is now (?) provided with a just king

(Verse 12) His son (was) a great hero, illuminating (the earth) as far as the coast (of the ocean), called Vijayāditya by name, the best of just rulers

(Verse 13) His (son) was the long-armed king Malla-dēva, the ornament of the Bāna race (and) the lord of the whole earth.

(Verse 14) To him was born the powerful great hero Jayamēru, the breaker of the circle of all enemies, (and) whose valour was inconceivable

(Verse 15) Let that king Vikramāditya be victorious, the lord of princes, whose orders were marked (*i e* bowed to) by the diadems of all rulers of the earth !

(Verse 16) King Vikramāditya had a very brave son, who bore the name Vijayāditya, (and) who uprooted proud enemies by (his) strong arm

(Verse 17) The renowned Prabhumēru knew the spell of five members[2], his thoughts were occupied with the six measures of politics; (and) his ministers were employed with polity.

(Verse 18) By his great wise son Vikramādityavarman, who propitiated Giritra (Śiva), (and) who removed distress, (this grant was made)

(Line 33) Moreover —

(Verse 19) The noble ruler of princes, Nanda by name, whose arms were powerful, (had) presented to chiefs of Brāhmaṇas the village called Viprapīṭha by name

(Verse 20.) But Vijayāditya's son, that virtuous lord who was celebrated (by the name of) Vikramāditya, granted a confirmation (of the former grant) to this (village), after having submitted (this matter) to (his) father

(Line 37) If (you ask) to what kind (of people) he granted the confirmation —to those who were abodes of prosperity (*padmā*), as Brahmā dwells on a lotus-flower (*padma*), who supported a circle (*chakra*) of virtuous men, as Nārāyana (Vishṇu) holds an excellent discus (*chakra*), who were beloved by bright welfare (*bhūti*), as Śiva is fond of white ashes (*bhūti*), who resided near (the temple of) Śiva, as Kumāra rests on Śiva's lap, whose mouths resounded with the recital of the three Vēdas, who practised in a suitable manner the conduct of

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[1] *Cf* verse 3 of the Udayēndiram plates, above, Vol III, p 78

[2] *Viz* the five syllables *namaś=Śivāya*, "obeisance to Śiva ! " *Cf* ll 1, 14. [*Pañchāṅga-mantra* is ' counsel (consisting) of five subdivisions '; see Monier Williams s.v. *aṅga* —H K. S]

Parameshthin (Brahmā); who had advanced in (the study of) the three Vēdas', who had mastered all sciences, who (possessed) a series of gifts to Brāhmaṇas, who knew the (sacred) law, (and) whose draughts of Sōma were uninterrupted

(Line 43) Because he had obtained a boon from the god Paraśurāmēśvara, Vijayāditya's son Vikramāditya granted, at the direction of his father, the confirmation, accompanied by all exemptions (parihāra), to the chiefs of Brāhmanas residing in (the village) called Viprapītha.

(Verse 21) But the destroyer of enemies, that glorious son of Prabhumēru, requests all future rulers of the earth —

(Verse 22) "Let there rest for ever on my head the pairs of feet of those (kings) who protect this confirmation granted to chiefs of Brāhmanas!"

(Line 50.) This is the composition of Śivatama, son of Śiva-bhattāraka. Hail! To cows and Brāhmaṇas obeisance! This eulogy (praśasti) was written by Parahit-āchāri [1]

(Line 53) The revenue assessment[2] of this (village amounted to) five hundred kāḍi[3] (of) paddy and ten-(kalañju of) gold.

No 2 —TUMBAGI INSCRIPTION OF THE REIGN OF SATYASRAYA   SAKA 926
By Lionel D Barnett

Tumbagi, or, as the name was anciently spelt, Tumbige, is a village lying in lat 16° 34' and long 76° 20', in the Muddebihāl tāluka of Bijāpūr District, and formerly was included in the Pagalatti Three-hundred   The name is given as "Toombgee" on the Indian Atlas sheet 57 and as "Tumbgi" on the Bombay Survey sheet 350   It contains a monastery known as "Polayya's Maṭh," at the well of which there is (or was) a stone inscribed with the present record   A bad copy was made by Elliot's pandit, and appears in Vol I, fol 17a of the Elliot Collection (Royal Asiatic Society's copy)   I now edit the text from good ink-impressions prepared for the late Dr Fleet, which are now in the British Museum [4]—The stone is a long narrow block, with an upper compartment in front containing sculptures, viz in the centre a linga on a stand, with an upright figure of a votary facing it on the proper right of it, and still further to the right a cow with sucking calf   Underneath this is the inscribed area, which seems to include three faces of the slab   The first face, containing ll 1-17, is about 1 ft 1 in wide and 3 ft high, the second, containing ll 18-40, is about 10 in wide and 3 ft 7 in high, the third, containing ll 41—end, is about 3 ft 8½ in high and 6 in wide, except at the bottom, where it runs out towards the right to a width of 10¾ in, enclosing the last two lines —The character is fair Kanarese, somewhat inclined to angularity, with letters varying from 1 in to 1½ in in height   Its whole tendency is towards the later type, rather than the archaic   The cursive v is found only in the ligature rvva (ll 51,̄ 58) —The language is Old Kanarese, except for the concluding Sanskrit verses   We may note the sporadic change of m to v in -āchchhādanaiaʼn (l 32) and mahājanavuv= (ll 43-4), and the conditionals ādade (l 37) and appade (l 45), which all shew a tendency towards the medieval dialect

The record opens (ll 1-8) by referring itself to the reign of Akalankacharita Irivabedanga Satyāśraya (Dynast Kanar Distr, p 432), while his officer Setti Brahmayya was administering Tumbagi (ll 8-15), and registers gifts to local religious foundations by the latter and a lady named Āychakabbe, with rules for their management (ll 15 ff.).

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[1] āchāri, 'an artisan,' is a Tamil form of āchārya

[2] Puravu occurs also in South-Ind Inscr, Vol. II, p 386, text line 99, and above, Vol. IV, p 224, text line
19   For its meaning see the Madras Epigraphical Report for 1920, p 96.

[3] The same measure is mentioned in South-Ind Inscr, Vol I, pp. 117, 140

[4] A notice of the inscription has been given by Dr Fleet above, Vol. XII, p. 306.

The date is specified on ll 11-15 as Śaka 926 (expired), Krōdhi ; Āshāḍha *amāvāsya*, an eclipse of the sun This is quite regular The Southern cycle is used, and according to the *Sūrya-siddhānta* (true system) the *tithi* quoted was connected with **Thursday, 20 July, A.D. 1004,** ending 3 h 33 m after mean sunrise (for Ujjain) On that day there was an eclipse of the sun at 3 h 18 m after sunrise by Laṅkā time Mr R Sewell, who has kindly examined this date at my request, remarks that by the true system of the *Ārya-siddhānta* the result is the same, but that by the mean system of the *Ārya-siddhānta* the *tithi* was connected with the previous **Wednesday, 19 July**

The place-names mentioned are : the Pagalatti Three-hundred (l 10), the Tumbige Agrahāra (l 11), and Kalkere (ll 23-4) On Pagalatti I may refer to the remarks of Dr Fleet above, Vol XII, p 306 ff, where he identifies it with the district variously called Hagariṭige, Hagariṭṭage, or Hagaratage and connected with the village formerly designated Hagaritage, Hagaliṭṭage, or Hagariṭṭage, and now known as Hagarattagi, Hagariṭige, Hagariṭṭige, or Hagariṭṭigi, in the Shōrāpūr *tāluka* of Gulbarga District in the Nizam's Territories Kalkere cannot be identified with certainty, there are several places of the name.

TEXT [1]

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 1  Svasti  samasta-bhuvan-āśra-
 2  ya  Śrī-Pri(pṛi)thvī-vallabha
 3  mahārājādhirāja  para-
 4  mēśvara  paramabhaṭṭārakam
 5  Satyāśraya-kula-tilaka-
 6  n=Akalamkacharitan=Irivа-
 7  beḍamgam  śrimat  Satyā-
 8  śraya-dēvara  pāda-padm-ō-
 9  pajīvi  Setti  Brahmayyam
10  Pagalatti  300raṟa  bali-
11  ya  Tumbige-agrahāra  Śa-
12  kha-varisha[2]  926neya  Krō-
13  dhi-samvatsarad=Āshāḍa(dha)d=amā-
14  vāsyeya[m]duve  sūryya-gra[ha*]-
15  nadandu  Setti  Brahmayyam  Bra-
16  h[m]ēsva(śva)ra-dēvargge  bitta  ke-
17  y=matta  200  ada  *  *  *
18  paṟekāṟa-sūle-
19  yargge  kotta  key=ma-
20  tta  30  maṭa(tha)kke  kotta  ke-
21  y=matta  50  dēvālaya-
22  nimittam  kotta  ke-
23  y=matta  120  [l*]  Kalke-
24  ṟeya  Gennayyana
25  magal=Āychakabbe  ta-
26  mma  mēnyad=olage  ma-
27  ta(tha)kke  kotta  key=matta
28  50  antu  mata(tha)kke  ma-
29  tta  100  [l*]  Inn=allya  pha-
30  ladalu  brahmacharyya-
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31 m=ulla tapaśvıya 5
32 rgge¹ aśan-āchchhādanavam
33 nadeyısuvar=allı-
34 y=orvvar=pradhānar=appa-
35 vargge uttamāgra[m*] na-
36 deyısuva[r*] brahmacha-
37 ryy-ādı-lōpam=ādade
38 poṟa-vadısuvar=[n]-
39 ttamar=appar=amt=appa-
40 r=ı sthıtıyol=ı dharmmamam
41 pratıpālısuva-
42 r=ūr-odeyarum
43 mahājanavu-
44 v=ıdan=upēkshı-
45 sıdar=appade gu-
46 na-dōsham=ava-
47 [ra]n=ēṟugum ‖
48 ūr-odeyara-
49 l=akke mahāja-
50 nadol=akke ā-
51 van-orvvan=ı sthı-
52 tıyol=allade
53 peṟat=ondu sthı-
54 tıyol kıdı-
55 suv-avam śvāna-
56 gā(ga)rdabha-chāndālam
57 same(ma)ya-bāhıram [‖*]
58 Sarvvathā pālanīya-
59 m tta(tu) tad-dēśas=taıs=tu
60 bhūmıpaı[h*] [।*] ya-
61 sya yasya ya-
62 dā bhūmı[s*]=tasya
63 tasya tadā phalam [‖] [1*]
64 Sva-dattām para-da-
65 [t]tā[m v]ā yō ha-
66 rēta vasumdhar[ām] [।*]
67 shashthım varısha²-sa-
68 hasrānı vıshthā-
69 [y]ām jāyatō krımıh [‖* 2*
70 [Ma]mgala mahā-śrī ‖

TRANSLATION.

(Lınes 1-9) Settı Brahmayya, who finds sustenance at the lotus-feet of—haıl !—the refuge of the whole world, darlıng of Fortune and Earth, great Emperor, supreme Lord supreme Master, ornament of Satyāśraya's race, Akaḷankacharıta Irıvabedanga Satyasrayadēva —

(Lınes 10-23) (*While governing*) the Agrahāra of Tumbıge, formıng part of the Pagalattı Three-hundred, durıng the last lunar day of Āshādha in the cyclıc year Krōdhı,

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¹ Read 5 tapasvıyargge.   ² Read shashtır=varsha-.

the 926th (*year*) of the Śaka era, during an eclipse of the sun, Setti Brahmayya granted for the god Brahmēśvara a field, 200 *mattar*,   for the drummers and public women he granted a field, 30 *mattar*, for the monastery he granted a field, 50 *mattar*, for the benefit of the temple he granted a field, 120 *mattar*.

(Lines 23-29) Āychakabbe, daughter of Gennayya of Kalkere, granted for the monastery out of her own honorary estate a field, 50 *mattar*. Thus (*there are*) for the monastery 100 *mattar*

(Lines 29-47) Likewise out of the revenues of this land they shall provide food and clothing for the 5 ascetics living in celibacy. In the case of any superiors of this place, if there should be committed a breach of celibacy or the like in conducting the highest offices, they shall expel (*them*)[1]. The leading men shall be such. They shall preserve this pious foundation, under this constitution. If the mayors of the town and the burgesses should have neglected it, guilt shall accrue to them. Any person, whether of the mayors of the town or of the burgesses, who should violate this constitution or any other constitution, (*will become*) a dog, an ass, or a Chāndāla, an outcast from society

(Verses 1 and 2   Sanskrit formulæ)

(Line 70)   Happiness ! great fortune !

No 3—A NAGA FIGURE IN THE MATHURA MUSEUM

By Y R Gupte, B A

On page 18 of the Annual Progress Report of the Archæological Survey of India, Northern Circle, for the year 1908-1909 an inscribed pedestal from Rāl (No 45) is mentioned The upper part of the image must have been found since I examined the sculpture at Mathura. It represents a Nāga standing between two Nāgīs. The height of the sculpture is 4' 2'. The inscription measures about 2 ft in breadth and 7 in in height

The image came from a mound near the village of Bhadāl about six miles from Mathura. From local enquiries it appeared that people from the neighbouring villages used to visit the spot and vows were made to the deities by barren women. When they got sons, they resorted to the place for tonsuring their hair

The Nāga in the centre has a canopy of seven hoods with forked tongues, as is usually the case with the other Nāga images of Mathura, and is similarly dressed. The threefold triangular necklace is a little damaged on the breast. We can see the bracelet on the right wrist, and a similar one on the left is hidden by the upper garment. The position of the hands is similar to that of the Nāga figure from Mathura city of the Kushāna year 52 (*A S R* for 1908-9, Plate LIV). The left hand holds a small vessel; and a lotus bud is visible in the right. The Nāgīs are dressed in garments of the same stuff as the Nāga and have the same appurtenances in their hands. Beneath the feet of the deities were short inscriptions, now much defaced, which probably contained their names. The vestiges that remain favour this view.

On the pedestal are five males and five females and also two boys with folded hands. They are worshippers. The right hand of the man to the extreme proper right is gone. The male to the left and the female to the extreme proper left have their hands folded, the others holding lotus stalks in their right hands. On the lower part of the pedestal is an interesting inscription

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[1] [*Uttamāgram* means 'sumptuous meal', see *South Indian Inscriptions*, Vol III, Part III, p 256, footnote
1. (The meaning is One of the superior members of these will be provided with a sumptuous meal'.—H. K S]
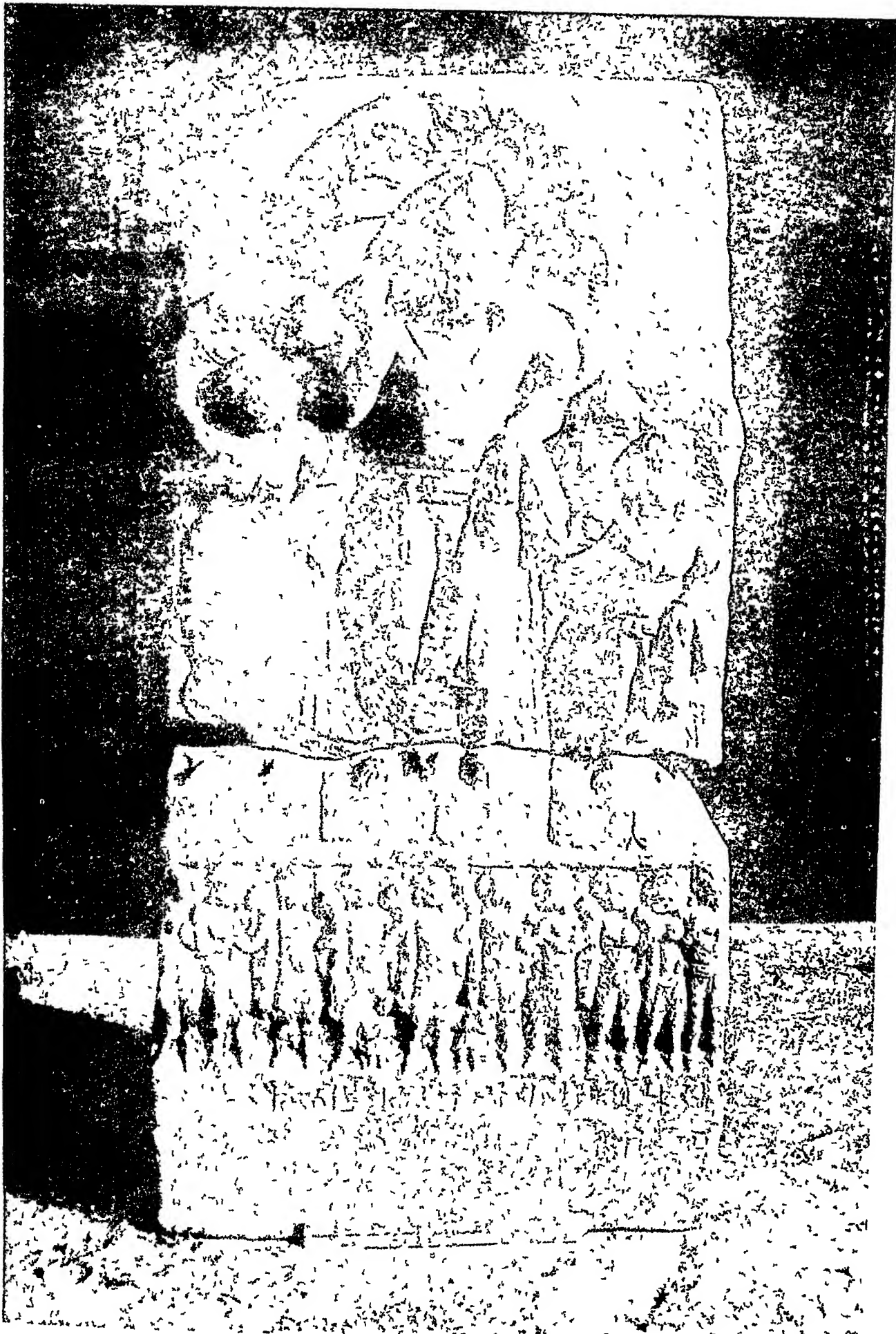
From a photograph kindly supplied by Mr H Hargreaves

SCALE ONE-SIXTH
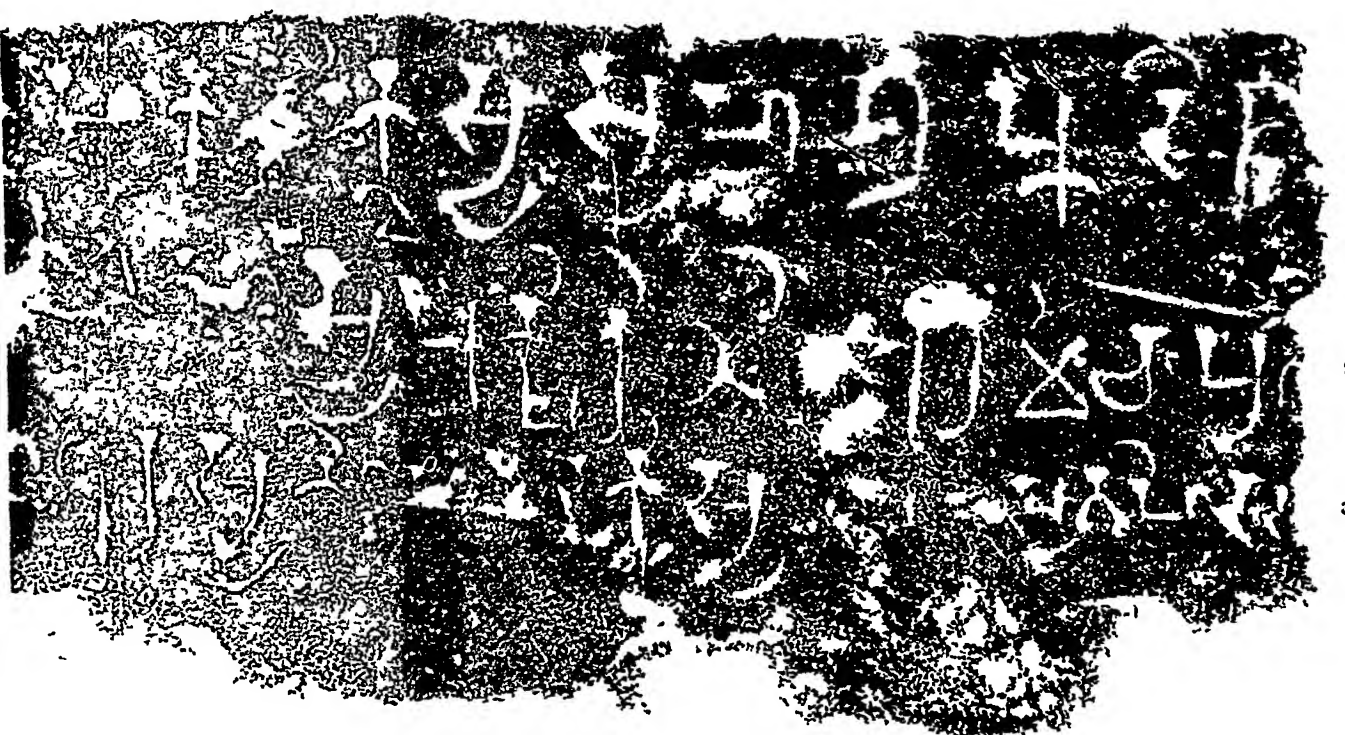
of three lines, of which the second and third are much damaged, making the decipherment of a part of the third line impossible

Several images of Nāga deities, both inscribed and without inscriptions, have been found in Mathura   Of these the following are dated —

Image of Dadhikarna, of Samvat 26 va 3 di 5 (*Ind Ant*, Vol. XXXIII, p 102, and *Ep Ind*, Vol I, pp 380 f and 390, No. XVIII, and Dr. Vogel's paper in the *Arch Survey Report* for 1908-9, pp 159 ff)

Nāga image of the year 40 of Huvishka, in the second month of winter, the 23rd day (Dr. Vogel's catalogue of the Arch Museum at Mathura, No. C 13, pp 88-9 , *A S R.* for 1908-9, p 161)

Nāga image of sa 52 va 3 di 25 (Dr Vogel's catalogue of the Arch. Museum at Mathura, p. 91), *Arch Survey Report* for 1908-9, p 161

Besides, there is a fragment which Dr Vogel assigned to the 3rd century of the Christian era (Dr Vogel's catalogue of the 'Arch Museum at Mathura, p ˙90 , *A. S. R* for 1908-9, p 162)

The image described in this note dates from the year 8 of the Kushāna era and is the earliest dated Nāga one at Mathura

The palæography does not call for many remarks. The general characteristics are dealt with in Dr Bühler's *Indian Palæography*, edited by Dr J F Fleet, p 41. The peculiarities observable in the present inscription are these —(1) The *kha* is triangular below, but its hook is large , (2) the upper horizontal stroke of *ra* is turned into a curve, while the lower is split up into lines ; (3) *ta* in the 3rd line shows a loop , (4) the lower part of *da* is more slanting than in all examples given by Dr Buhler , (5) *va* is rounded on the left , (6) the left limb of *sa* is never turned into a loop

<div align="center">TEXT.[1]</div>

L 1 Mahārājasya rāj-[ā]tirājasya [Shāhi] Kānikkhasya Sa[2] 8 grī 4 di 5

L. 2 as[yā]m p[ūrvv]āy[ā]m bhagavatah [Bhūmi-nāga]sya (1) pukshirini ār[ā]mö cha pra[ti]-

L 3 [shthāpitö . putras[y]a . turasya niya[mada]kisya [sarvva]sat[v]a hi(hita)-su (sukhārtham) (2) .

<div align="center">REMARKS</div>

(1) There can be little doubt about the reading *Svāmi-nāyasya*   I have examined the stone in all lights and shades   (2) *Hi* and *su* at the end of the third line stand for *hita-sukhārtham*. This abbreviation is due to want of space

<div align="center">TRANSLATION.</div>

In the year 8 of the great king, the king of kings the Shāhi Kānikkha in the fourth (month of) summer, on the 5th day on that (date specified as) above, a tank and a garden of the holy Bhūmi naga was founded   .   .   .   . °tura, son of . for the welfare and happiness of all sentient beings

The Prākritized form *Kānikkha* deserves notice   The form with the long *ā* in the first syllable has already been observed in two inscriptions, namely those on the statue of Kānishka

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¹ From the original
² It appears that the engraver first cut *sya*, but afterwards found out his mistake and deeply engraved only *sa*.

himself and the Bodhisattva statue of the Kushāṇa year 3, in the Sārnāth Museum   Bhūmināga
is first met with in this record.

No 4 —A VAKATAKA INSCRIPTION FROM GANJ.

By V S Sukthankar, Ph D

This inscription, which is now brought to notice for the first time, was discovered by my
friend Babū Rakhaldas Banerji, Superintendent, Archæological Survey of India, Western
Circle, in 1919, during one of his tours of inspection in Central India   The excellent estampages
from which the accompanying blocks have been prepared were made under his direct supervision,
and very kindly placed by him at my disposal for publication

The inscription, Mr Banerji tells me, is engraved on a detached slab of stone which he
found lying at the bottom of a *dongā*, adjoining a hill called Maluhā-ṭongi near Ganj in the
Ajayagaḍh (Ajaigarh) State in Bundelkhand   Close by is a ruined stone structure, probably a
dam to hold the waters of the stream passing along the *dongā*   The find-place of the record is
not far removed from the ruined city of Kuṭhārā, where Cunningham discovered in 1883-84
the Nāchanē-kī-talāi inscription, which was first brought to notice by him, in 1885, in *Archæo-
logical Survey of India*, Vol XXI, pp 97 f , and re-edited by Fleet in *Gupta Inscriptions*,
pp 233 ff and Pl xxxiii B   The Ganj inscription, like the one discovered by Cunningham, is
one of the oldest records of the Vākāṭaka dynasty, and as such is worthy of being carefully
preserved

From the subjoined transcript it will be seen that the text of our inscription is practically
identical with that of the Nāchanē-kī-talāi record of the reign of *Mahārāja* Pṛthivishēṇa, edited
by Fleet in *Gupta Inscriptions*, it differs from the latter only in the length and the number of
lines, and in the spelling of a couple of words   But our inscription is in a much better state of
preservation than that edited by Fleet, at all events the stone has yielded an impression far
superior to the one from which the block accompanying Fleet's article was prepared   Conse-
quently we can study the forms of the letters in the subjoined facsimile much better than in
that of the Nāchanē-kī-talāi version   Moreover, the writing of this inscription being perfectly
distinct, we can give a transcript which is more reliable, and which at the same time discloses
certain minor inaccuracies in Fleet's transcript, errors which even then could have been avoided
by a more patient study of the available material.

The writing covers a space about 25″ broad by 12″ high   In the centre of the first line
of the inscription there is a sculpture of a wheel, of which only a part is visible in the facsimile
The average size of such letters as m, p and v is about 2″ —The characters belong to the
'southern' variety of alphabets, of which the distinguishing features, in our inscription, are
the hooks at the lower ends of the verticals of l and r In particular, we may say that the letters
are a specimen of the Central Indian alphabet of the period, which on account of the peculiar
'box-headed' tops of the letters is known as the 'box-headed' sub-variety of the southern
alphabet [1]   In our specimen the boxes are very conspicuous, and uniformly hollow.   The letters
are unequal in size and uncouth in appearance   It may be added that they betray a conscious
effort to substitute angles for curves in the configuration of letters   The letters t and n are
sharply distinguished from each other· the latter has always a knot at its lower end.—The
language is Sanskrit, and the inscription is in prose —As regards the orthography the only
point calling for remark is the phonetic doubling of the d of dh, in °d-$ā(m)n\d{u}ddhyāto$° (1 2),
before y, and of the t of th, before r, in *punyā-rtthē* (1 3).

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[1] See Bühler, *Indische Palæographie*, p. 62.

1. A Vakataka Inscription from Ganj.

2 Mandagappattu Inscription of Vichitrachitta
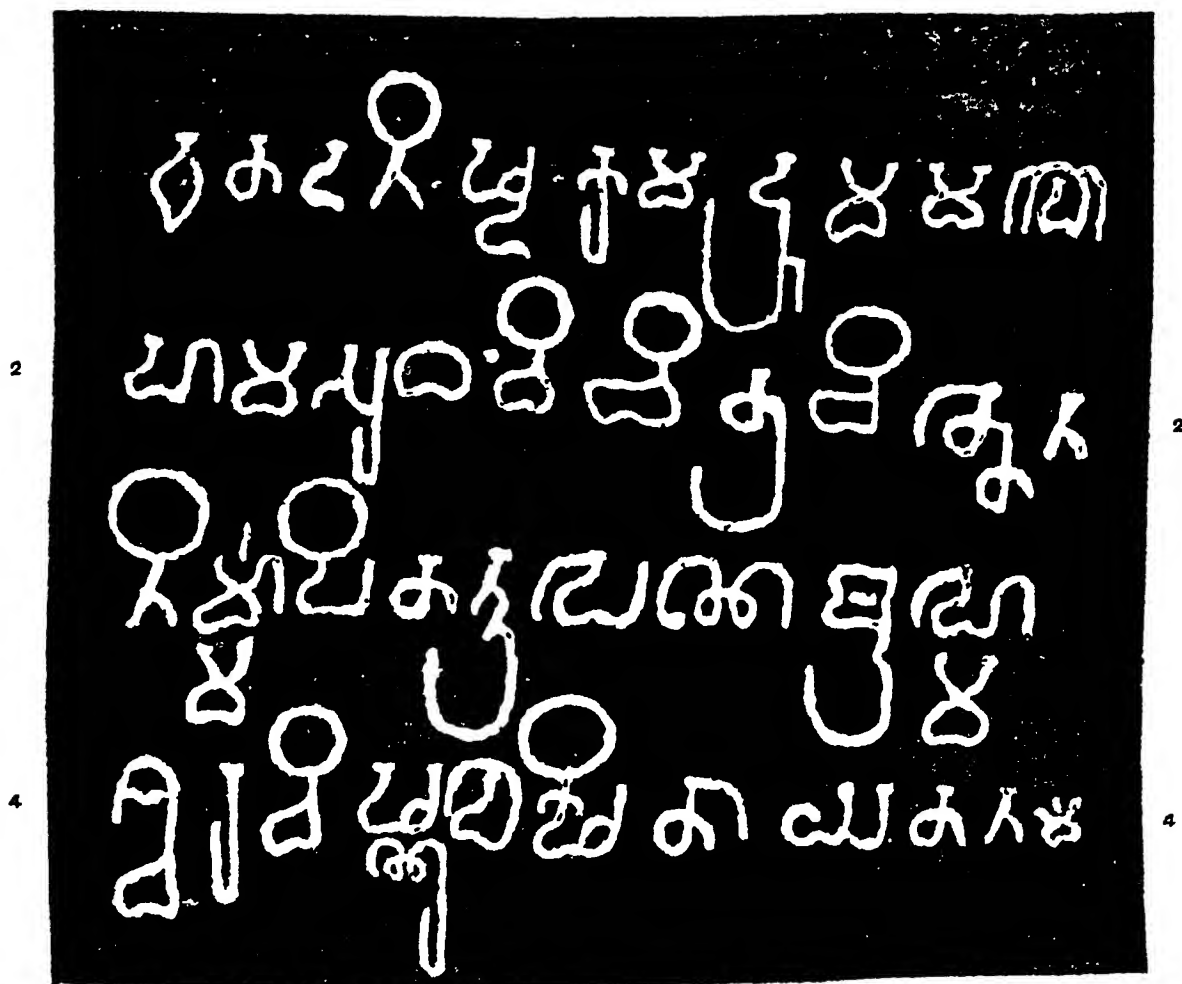
The inscription, which is a record of the reign of *Mahārāja* Pṛithivīshēṇa [I] of the Vākāṭaka family, states merely that a feudatory of his, Vyāghradēva by name, had made something or other for the sake of the religious merit of his parents   The exact nature of this act of piety has been left unspecified, just as in the other version discovered by Cunningham   The silence of these records on the point leads us to infer that the slabs on which the inscriptions are inscribed must have been built into that the making of which they were intended to record

Our information regarding the Vākāṭaka dynasty is unfortunately very scrappy   All the important events in its history known to us have been succinctly summarized by Kielhorn[1] in his article on the Bālāghāt plates of Pṛithivīshēṇa II , we can even now add nothing of consequence to what has been said there.   We do not possess exact dates for any of the kings of this family, nor can we form any clear idea of the extent of the country ruled over by them   Regarding Pṛithivīshēṇa I we know that he was the son of Rudrasēna I and the great-grandson of Pravarasēna I, the latter being either the very first king or one of the early kings of this house   It should seem that the Vākāṭaka king at whose hands the 'lord of Kuntala' had suffered defeat, as recorded in the Vākāṭaka stone inscription at Ajaṇṭā,[2] was this same Pṛithivīshēṇa.   Beyond these few facts we know nothing of much consequence regarding the king referred to in our record

About Vyāghradēva, the feudatory of Pṛithivīshēṇa, we know still less   Indeed, Vyāghra appears as the name of chieftains in several well-known inscriptions,[3] but it is not possible to identify our Vyāghradēva with any of them

Bühler[4] assigns the copper-plates of the Vākāṭaka Pravarasēna II., the grandson of Pṛithivīshēṇa I, to the fifth or sixth century A D , it is not known to me on what grounds   I have examined the inscriptions of the Vākāṭaka dynasty and compared them with the allied inscriptions engraved during the time of the Guptas,[5] of the kings of Śarabhapura,[6] of Tīvara,[7] of Kōsala and of the early Kadamba kings,[8] without being able to arrive at any definite conclusion regarding the age of the Vākāṭaka inscriptions.   Bühler's date, however, appears to me to be far too early   My impression is that there can be no objection, on palæographic grounds, to assigning this record of the Vākāṭakas to as late an epoch as the seventh century A D.   I conclude this short notice by drawing attention here to the remark of Kielhorn that the Bālāghāt plate of Pṛithivīshēṇa II, who was the son of the great-grandson of the Pṛithivīshēṇa of our inscription, "may be assigned with probability to about the second half of the eighth century A.D "[9]

TEXT.[10]

1   [11]Vākāṭakānā   mahārāja-śrī[12]-
2   Pṛithivīshēna-pād-ā(m)nuddhyātō   Vyāghradē-
3   vō   mātāpitrō[h*]   [13]puny-ārtthē   [14]kṛitam=iti   [||*]

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[1] Above, Vol IX, pp 268 f   [2] *Arch Surv. West Ind* , Vol. IV, p 124, verse 8.
[3] Kielhorn's *List of Inscriptions of Northern India*, Nos. 270, 387 and 509
[4] *Indische Palæographie*, pp 62 f   [5] *Corpus Inscriptionum Indicarum*, Vol I, Nos. 2-8.
[6] *Gupta Inscriptions*, Nos 40 41   [7] *Ibid* , No. 81
[8] *Ind Ant* , Vol VII, pp 35-7   [9] Above, Vol IX, p 270
[10] From a set of estampages prepared and kindly lent to me by Mr R D Banerji
[11] Read *Vākāṭakānām*   Fleet in his transcript has wrongly spelt this word with the dental *n* in *Gupta Inscriptions*, Nos 53 54
[12] Read *śrī*
[13] Read *puny ārtthē*.   Here also Fleet has wrongly transcribed the word, both as regards the dental *n* and the case ending   In Cunningham's version the word is spelt exactly as here.
[14] The construction is faulty   The verb should be in the active voice.

TRANSLATION.

Vyāghradēva, who meditates on the feet of the *Mahārāja* the illustrious Pṛithivishēṇa, (of the family) of the Vākāṭakas, has made (this) for the sake of the religious merit of (his) parents.

No 5.—MANDAGAPPATTU INSCRIPTION OF VICHITRA-CHITTA
By T A Gopinatha Rao, M A, Trivandram

The small village of Mandagappaṭṭu is situated in the Villupuram *Tāluka* of the South Arcot District and is about five miles south-west of Pēranai, a station on the main line of the South Indian Railway   In a small hill near Mandagappaṭṭu is cut out a shrine, on the façade of which is engraved the inscription which is edited below.   The shrine has at its back end three niches, which are dedicated to the gods Brahmā, Īśvara and Vishnu respectively   On the panels on either side of this shrine is carved a *dvāra-pālaka* ; the figure on the right very much resembles those which are found in the rock-cut shrines attributable to the Pallava king Mahēndravarman I.   From this and other considerations based upon its architectural peculiarities Mons G Jouveau-Dubreuil has attributed its excavation to Mahēndravarman I   A photograph of the front view of this rock-cut shrine is given by him in his *Pallava Antiquities*, Vol I, Pl XXVIII   The cave was visited by the staff of the office of the Madras Epigraphist, and the inscription was copied in 1905   Regarding this cave Mr. Venkayya wrote in his *Annual Report on Epigraphy* for that year thus :—" The cave at Dalavāṇūr in the Tindivanam *Taluka* consists of a shrine and a *mandapa* in front of it, thus resembling to a certain extent the upper cave at Trichinopoly, while that at Mandagappaṭṭu (mentioned in Mr Sewell's *List of Antiquities*, Vol I, p. 209) is a smaller one, which looks as if it had been left unfinished   .   .   .
There is only one inscription in the Mandagappaṭṭu cave, which is so much damaged that the name of the king cannot be made out.   To judge from what remains of it, we may say that it must also belong to the Pallava period   And, as we know that it was Mahēndravarman I of that dynasty that excavated almost all the hitherto known monolithic caves in the Tamil country, we may not be altogether wrong, if we suppose that the one at Mandagappaṭṭu also came into existence during his reign "   Depending upon probability, Mr Venkayya hazarded a guess which has now turned out to be quite correct   It is true that the shrine was excavated during the reign of Mahēndravarman I , but no serious attempts were made by the Madras Government Epigraphists at deciphering this epigraph   The credit of having made out the name of the king belongs to the French Professor, Mons G Jouveau-Dubreuil, of Pondicherry   He has visited Mandagappaṭṭu more than once to obtain eye-copies and mechanical impressions, as also to acquire any further knowledge by studying the inscription directly from the stone   His zeal and perseverance have been richly rewarded by his discovery of the name of the king in whose reign the shrine was excavated   At this stage he sent me the impression of the inscription and his eye-copy, so that I might complete the reading of the document, translate and annotate it.   When my notes, translation, etc, went to him, it had become impossible for him to edit the inscription himself, for he had to proceed to Cochin China on military duty   He therefore sent me a good photograph of a very carefully prepared eye-copy and asked me to edit the epigraph as early as possible   From the mechanical impression kindly lent to me by Mons Jouveau-Dubreuil and the photograph of the eye-copy prepared jointly by me and that gentleman I edit this important inscription below

The record consists of four lines of writing in Grantha characters of the first half of the 7th century A D , and is a Sanskrit verse in the *Gīti* metre   As has been remarked by Messrs. Venkayya and Jouveau-Dubreuil, the inscription is somewhat badly damaged, and it is only with difficulty that one can read it successfully, but one need not on this score imagine that the

reading is fanciful   The inscription states that the shrine was caused to be made by the king Vichitra-chitta for the accommodation of the three deities Brahmā, Īśvara and Vishnu, without using in its construction bricks, timber, metal or mortar   This short record is of importance in more ways than one   The most important information conveyed by it is that before the time of Vichitra-chitta bricks, timber, metal and mortar were the common temple building materials   Evidently the basement and walls of the buildings were of brick work, plastered with chunam, and the superstructures were composed of wood work held in position by the use of metallic nails and bands   This, in fact, is even to this day the mode of construction of temples on the Malabar Coast   It is difficult to find a single temple in Southern India which belongs to a date prior to the 7th century of the Christian Era   One would naturally be inclined, therefore, to surmise that temple building was never in vogue before that century   But immediately after this period we see a number of temples which have sprung into existence, and this also seems to lend weight to the surmise that no temples were built before the time of Mahēndravarman I in Southern India   The statement made in this inscription that Mahēndravarman did not employ bricks, timber, metals and mortar clearly warrants us in drawing the conclusion that the temples built before his time were all of such easily perishable materials as bricks, etc, that they were all ruined in course of time, and that this is the first rock-cut shrine of his   This is clear from the special mention of *anishtaka*, etc, in the case of this shrine   It is impossible for a number of temples to have come suddenly into existence from the beginning of the 7th century, unless the building of temples had been practised long before

We know from the inscriptions of the cave temple at Pallāvaram that Vichitra-chitta was one of the *birudas* of Mahēndravarman I (see Pl XXI in the *Pallava Antiquities* of Mons G Jouveau-Dubreuil, wherein the name Vichitra-chitta is clearly legible, *vide* also for the *biruda* Vichitra-chitta, p 74, para 14, of *Ep An Rep* for 1909). It is, therefore, patent that the shrine was caused to be excavated by Mahēndravarman I

Again, the *biruda* Vichitra-chitta means 'the curious or inventive-minded one'   One can easily concede to the king Mahēndravarman the title 'inventive-minded,' in so far as he avoided bricks, etc., commonly used by all in the construction of their buildings, and devised quite a new path, namely the cutting out of rock-temples, which needed neither bricks, timber nor mortar   His country extended far north of the river Krishnā, where he must necessarily have seen some of the earlier rock-cut temples and so have introduced into Southern India the new style of cutting temples in rock.   That he was the first to introduce into Southern India the method of excavating temples in the solid rock is certain; for we do not find even a single rock-cut shrine which belongs to a time before the reign of Mahēndravarman   We know of no less than fifty rock-cut shrines in Southern India, not one of which is earlier than the time of this Pallava king   In fact, the art of cutting temples out of rock was contemporaneous with the Pallava dynasty and disappeared after them [1]

The *birudas* of Mahēndravarman are not mere boasts, each of them has a meaning which is based upon some act done by him   We have seen that the *biruda* Vichitra-chitta is assumed by him for his invention of a new method of raising temples   Similarly, the *biruda* Matta-vilāsa is, in fact, indeed due to his having composed the pleasant little burlesque the *Mattavilāsa-prahasana*, in which he ridicules an actual *matta* or madman, a drunken Kāpālika and meat eating Bauddha Bhikshu [2]   Mention is made of this burlesque in his inscription found in Māmandūr,

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[1] [See *South-Indian Images*, Introduction, pp 1 f —H K S]

[2] The following extracts from this work will show that it was the composition of Mahēndravarman

सूत्रधार —भवति ¹ श्रूयताम् । पल्लवकुलघरधिसच्छकुलपर्वतस्य सर्वनयविजितसमस्तसामन्तमण्डलस्य आखण्डल-समपराक्रमधियः श्रीमद्चिमातृपदानविभूतिपरिभूतराजराज्ञस श्रीचित्रविष्णुवर्मण. पुत्र. यतुपण्डूर्गनियहपर परस्त्रितयपरतन्त्रतया महामूतसधर्मा महाराज श्रीमदेन्द्रविक्रमवर्मा नाम ।

The *birudas* Avani-bhājana, Guna-bhara, Matta-vilāsa and Satra-malla are also introduced ingeniously in the play , these, we know, are the *birudas* of Mahēndravarman I.

the portion where it occurs is somewhat damaged, but the name of the work is not broken, the passage runs thus *Mattavilāsādi-padam=prahasan-ōttamam*[1] and in the other fragments of the inscription we see that mention is made of poets like Vyāsa and Vālmīki, as also of *tālas*, etc, of music   Thus then each *biruda* of Mahēndravarman appears to have been bestowed on him or assumed by him for some ostensible reason   The *biruda* Sankīrna jāti[2] of this king is rather curious, it means 'of mixed caste.' Perhaps the parents of Mahēndravarman were of different castes.   The significance of the other *birudas* will become patent as further researches are made

It is interesting to note that at the time of Mahēndravarman the three deities Brahmā, Śiva and Vishnu were enshrined together in the same temple in adjacent niches   Such a group consisting of Brahmā, Vishnu and Śiva is called Hari-Hara-Pitāmaha or Dattātrēya   (See my *Elements of Hindu Iconography*, Vol I, pp 251-256, as also Pl LXXII, fig. 1 of the same volume)   At Mahābalipuram also there exists a Trimūrti cave, but, strangely enough, the cell which is supposed to have been dedicated to Brahmā is occupied by a figure which has only one face   The figure of Brahmā ought, according to the *āgamas*, to be always shaped with four faces, and in practice also we find that three faces are always shown in sculpture, the fourth being supposed to be at the back of the figure   In spite of the fact that the figure in the Mahābalipuram rock-cut shrine has only one face Dr Vogel in his *Iconographic Notes on the Seven Pagodas*, contributed to the Director-General of Archæology's Annual Report for 1910-11, identifies the figure with Brahmā (see page 58)   Prof Jouveau-Dubreuil has sent me a note containing his own explanation concerning this image for publication here, which I reproduce below   "The Trimūrti cave at Mahābalipuram is formed of three cells, the one on the right contains an image of Vishnu, and the middle one an image of Śiva   It is, therefore, but natural to suppose that the left cell contains an image of Brahmā   I was the first author to remark (vide *Archéologie du Sud de l'Inde*, Vol II, Pl XVIII B) that the god in the left cell has only one head and so could not be identified with Brahmā   I have thought fit to affirm that this unknown god is Subrahmanya, who is represented also on the ground-floor of the Dharmarāja Ratha[3] (*Archéologie du Sud de l'Inde*, Vol II, Pl XVIII B)   However, the problem why the trinity Subrahmanya, Śiva and Vishnu is found in place of the usual trinity Brahmā, Vishnu and Śiva has remained till now unsolved   I believe I shall be able to explain why Subrahmanya is substituted for Brahmā in the group of the trinity at Mahābalipuram   Mr. T A Gopinatha Rao says in his *Elements of Hindu Iconography*, Vol II, Part II, page 439, 'Brahma-śāstā : This is the aspect of Subrahmanya in which he put down the pride of Brahmā by exposing his ignorance of the Vēdas   He should be represented with a single face and four arms; he should have only two eyes   In the back hands there should be the *akshamālā* and the *kamandalu*,[4] and the front hands should be held in the *varada* and *abhaya* poses   The colour of Brahma-śāstā should be the red of the lotus flower'   If we note that the image of Subrahmanya in the Trimūrti cave wears on its breast a double chaplet of *rudrāksha* beads, and that at the entrance to the sanctuary there are two personages dressed as Sannyāsins and having pointed beards, we shall conclude that the sculptors of Mahābalipuram have put Subrahmanya in the place of

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[1] This fact was also discovered by Prof Jouveau-Dubreuil   see his *Pallavas*, p 38
[2] [*Sankīrnajāti* is the name of a variety of musical time   Perhaps Mahēndravarman I held this *biruda* as an inventor of this method of keeping musical time.—H. K S]
[3] Behind the rock bearing the Trimūrti shrine are executed the figures of a peacock, an elephant and a monkey, carved in half relief   We know that the peacock is the characteristic vehicle (*vāhana*) of Subrahmanya. The elephant is generally associated with the temple of Sāstā, and is here perhaps intended to show that the image is that of Brahma sāstā   [Temples of Traipurushadēva are found dedicated to Sun, Śiva and Vishnu. Why should not the Brahma sāstā figure represent the Sun ?—H K S]
[4] Dr Vogel takes the objects in the back hands as a flower and a ring, neither of which is right. The hands carry only a *kamandalu* and an *akshamālā*, as required by the *āgamas*.

Brahmā because they have placed there Brahma-śāstā, a deity superior to Brahmā in his knowledge of the Vēdas   I think fit to draw attention to the existence of the trinity consisting of Subrahmaṇya, Śiva and Vishṇu and also to explain it with the help of the above-mentioned excellent work of M R Ry T A Gopinatha Rao "[1]

TEXT.[2]

1 एतदनिष्टकमद्रुम[सली]-
2 ह्रमस्रुधं[विचिन्नचि]त्तेन [।*]
3 निर्मापितन्रुपे[ण] ब्रह्मे-
4 श्वरविष्णुल[न्चि]तायतनम् [॥*]

TRANSLATION.

This brickless, timberless, metalless and mortarless temple, which is a mansion for (the Gods) Brahmā, Īśvara and Vishnu was caused to be created by the king Vichitra-chitta.

No 6—THE FIRST ARYA-SIDDHANTA.
MEAN SYSTEM
(A continuation of the author's " Indian Chronography ")
BY ROBERT SEWELL, I C S (RETIRED).

303 It has long been known that in earlier years the Pañchāng Brahmans in India framed their local almanacs on calculations made by the use of the mean, as opposed to the true or apparent, motions of the sun and moon   The change from the mean to the true systems of calculation was advocated by Śrīpati (A D 1040), and the latter system may have been adopted in some places about that time, becoming more general from about A D 1100 onwards India, however, is a very conservative country, and the late Dr Fleet was of opinion that the mean system may have been adhered to, in some tracts at least, till a far later date

304 With this opinion in mind I have prepared the Tables which follow, so as to cover the period of nine centuries from Āryabhaṭa's date, K Y 3600 (A D 499-500), to 4500 (A D 1399-1400)   It would be well if all dates of inscriptions that have hitherto been set aside as irregular by epigraphists could be re-examined, seeing that the difference between the two systems of the *Ārya Siddhānta* constantly leads to differences in the computed positions of the sun and moon on the same civil day, and consequently to differences in the almanac, let alone the differences caused by the use of different Siddhāntas

Thus, to give an example   The civil day, Monday, 21 October A D 1090, was by the Ārya Siddhānta true system described as "Monday, 25 Tulā, nija Āśvina kr 10," while by the mean system it was "Monday, 27 Tulā, Kārttika kr 10"   Thursday, 31 Oct, in the same year was by the true system "Thursday, 5 Vṛśchika, Kārttika śukla 6," while by the mean system it was "Thursday, 7 Vṛśchika, Mārgaśira śukla 5"

305 The present Tables are based on the First Ārya Siddhānta as amended by Lalla   The principal Table LXXVI is framed on the lines of the *Indian Calendar*, Table I, so as to meet the convenience of epigraphists who have become accustomed to the use of that work   The numbers of the columns are made to correspond in both Tables

Results of calculation carried out by the present Tables will be found to correspond with those worked by use of Professor H Jacobi's skeleton Tables published in Vol XI above There is no need for me to dwell on the great services he has rendered to the cause of Indian history and epigraphy   These are well known   All I have done is to follow in his footsteps,

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[1] This note is reproduced here exactly as it was sent by Mons G Jouveau Dubreuil, no corrections have been effected in it

[2] [For Plate see the article on ' A Vākāṭaka Inscription from Ganj.'—F W T]

verify his figures to the best of my ability and apply the results to practical use. Any little differences that exist between us have been fully set forth and their cause explained

Elements   Ārya Siddhānta, mean system

306 (i) The length of the mean sidereal solar year is 365^d 6^h 12^m 30^s, or 365^d 2586805

(ii) For the sun's mean motion per day, hour, etc., see Tables XLIII, XLIV, above, Vol XIV

(iii) The distance of mean moon from mean sun (our a), measured in 10,000ths of the circle, i e 10,000ths of the mean synodical revolution of the moon and excluding 12 whole revolutions, increases, during one sidereal solar year, from 0 to 3688·231484714 That is the advance of a in the year   Table LXIV A above, col 3, shews this advance per day, and Table LXV the advance per hour, etc.

(iv) The value of a in mean reckoning corresponds to that of t, the tithi-index, in true reckoning It shews what mean tithi was current at the moment in question[1] In general calculation by the Tables this moment is the moment of mean sunrise at Lankā, taken as 6 A M

(v) In reckoning by 10,000ths of the circle the advance of a in one mean solar month is 307 352623726

(vi) Each mean solar month consists of 30^d 10^h 31^m 2½^s The collective duration from the moment of mean Mēsha-samkrānti (the beginning of the mean solar year when the mean sun is at celestial long 0°) to each separate samkrānti, or the moment when the mean sun enters each of the signs, is given in Table LXXVII

(vii) The length of each mean lunar month is 29^d 12^h 44^m 2^s 79 or 29^d 530587946, during which the mean moon's distance from mean sun increases, in our circle reckoning, from 0 to 10,000   The length of one mean tithi, or one-thirtieth of the mean lunar synodic month, is 23^h 37^m 28^s 09, or 0^d 984352931, during which, in circle reckoning, the increase of a is 333 $\overset{\cdot}{3}$

(viii) The sōdhya, or time-difference between the moments of arrival at celestial long 0° of the true and mean suns, which moments are known respectively as the true and mean Mēsha-samkrāntis, is 2^d 3^h 32^m 30^s, true Mēsha-samkrānti being the earlier

The time of occurrence of mean Mēsha-samkrānti in every year is given in Table LXXVI, cols. 13 to 17

(ix) The samvatsara name of the solar year is the same by both true and mean reckonings, except in the years A D 564-5, 905-6, 990-1, 1246-7 and 1331-2, A special footnote is appended to the main Table LXXVI in each case

(x) There can be no suppression of a lunar month when calculation is made by the mean system, for the length of a mean solar month is greater than that of a mean lunar month, so that two mean solar samkrāntis cannot take place within the limits of one mean lunar month

(xi) Let it be noted that no intercalation of a lunar month can take place unless, at mean sunrise of the day on which mean Mēsha-samkrānti took place, the value of a is more than 6280 4892, or unless at the moment of mean Mēsha-samkrānti the value of a is more than 6619 1211, the latter value being 10,000 — 3380 8789, the total increase of a from Mēsha- to Mina-samkrānti, and the former being 6619 1211 — 338 6319, the latter value being the increase of a in 24-hours

The 19-year intercalation cycle

307 (See Indian Calendar, § 50, p 29) By the mean system the cycle-sequence is found to work with almost perfect regularity After four successive intercalations at intervals of 19 years each the intercalated lunar month gives way to the month preceding it But there are

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[1] The equations of sun and moon are not taken into account in mean reckoning.

two exceptions in the nine centuries, embraced in Table LXXVI. Between A.D. 751 and 827 there is a run of five intercalary mean Pausha months, and between A.D. 1242 and 1318 there is a run of five intercalary mean Âsvina months.

In eleven instances the names of the mean intercalary months given in Table LXXVI differ from those stated in the *Indian Calendar.* These differences are due to the former calculations having been based on Professor Jacobi's earliest Tables published 30 years ago, while the present ones agree with the results of calculation made by his more recent elementary fixtures. Each difference is specially noted at foot of Table LXXVI.

The nakshatra.

308 In the mean system the position at any moment of the mean moon in the ecliptic circle, i.e. the mean moon's nakshatra, is found by adding her mean distance from the mean sun to the latter's longitude, that is to say, by adding to the value of s (the mean sun's longitude) the value of a at the same moment as found by calculation for the mean tithi. All work by the Tables being in the first instance for the mean positions of sun and moon at mean sunrise of any day, Table LXXX provides the sun's mean long., s, in 10,000ths of the circle, for each period of 24-hours measured from the moment of mean Mêsha-samkrânti, while Table LXXXI states the same increase for fractions of the day. To obtain the value of s for mean sunrise of any day it is necessary to note first its value after the interval of days between the day of Mêsha-samkrânti and the given day (Table LXXX), and, since that value is measured from the moment of Mêsha-samkrânti and not from mean sunrise, afterwards to deduct from the value so obtained the increase during that fraction of the day (Table LXXXI). The result is the required s, or the mean sun's long. at mean sunrise of the given day. Then $s+a=n$, the nakshatra index required, or the mean moon's place in the ecliptic circle at mean sunrise of that day.

The Rule for work, then, is as follows. Find the value of a $(=t)$, the mean tithi-index at mean sunrise of the given day (*Example 2 below*). Note the serial number of the day as measured from Jan 1. Deduct from this the serial number of the day of mean Mêsha-samkrânti (*Table LXXVI, col 13, in brackets*). This gives the number of intervening days. Turn to Table LXXX and note the value of s against that interval of days. Deduct from this the mean sun's movement given in Table LXXXI during the hours and minutes stated in Table LXXVI, col. 17. The result is the required value of s at mean sunrise of the given day. Add s to a. This $=n$, the required nakshatra-index. Table LXVIII above, or Table VIII, *Indian Calendar,* gives the name of the nakshatra.

The Tables.

309. Table LXXVI corresponds to Table I *Indian Calendar* in formation and is to be used in the same way. Here the value of a is the value of t. It gives the tithi-index direct without further calculation.[1]

Table LXXVII shews the duration and collective duration of mean solar months, and the increase in the moon's phase, a, during each such month.

Table LXXVIII gives the value of a at the beginning of each Kaliyuga century.

Table LXXIX corresponds, with a necessary shift of position, to Table LXXIV above; the use of which is fully explained in my former papers, §§ 279, 301.

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[1] To find the value of a, or t, i.e. the exact moon's phase, in 10,000ths of the circle, at any moment of any day, note its value at mean sunrise of the first civil day of the luni-solar year, as given in Table LXXVI (col 23), and add its value for intervening days, hours, etc. (*Tables LXIV, LXV under heading a*).

Tables LXXVIII and LXXIX, with Table LXXIII above (under heading *a*), which gives the value of *a* at the beginning of each year of the Kaliyuga century, enable us to find the value of *a* at mean sunrise of the civil day Chaitra śukla 1 at the beginning of each luni-solar year. Tables LXXVIII and LXXIII yield the value of *a* at mean sunrise of the day on which mean Mēsha-samkrānti occurred, and Table LXXIX enables, by addition, the *a* for the interval of days between that day and the day Chaitra śukla 1 to be ascertained. [The same can be found by subtracting from the sum of the values obtained from Tables LXXVIII and LXXIII (col *a*) the value for those intervening days given in Table LXIV above (*see Example 1*).]

The use of Tables LXXX and LXXXI is explained above (§ 308) They correspond, *mutatis mutandis*, with Tables XLVIII A, XLIX above used in calculation for the sun's true longitude

310 The century-Table LXXVIII requires some further explanation Its object is to determine the mean moon's phase, *a*, at mean sunrise of the opening civil day of each Kaliyuga century, i e the day on which mean Mēsha-samkrānti occurred at some time later on that day. Reference to Table LXXVI shows that this opening day occurred at the beginnings of centuries 36 and 37 K Y on a Sunday, and in centuries 38 to 45 on a Saturday From Table I, *Indian Calendar*, by adding the *śōdhya* interval (*above*, § 306, viii) to the date and time there given for the moment of true Mēsha samkrānti, we find that in centuries 46 to 48 it fell on a Friday In the mean system, therefore, centuries 37 and 45 were defective centuries, while the rest were common

Table LXXVIII corresponds to Table LXXII above, which concerns true solar years, and by the true system, i e calculation by the movements of true sun, the only defective century was century 42 This accounts for the difference between the two Tables

It has been shewn above (§ 299, i) that the actual value of *a* at mean sunrise of Sunday, 21 March A.D 499, on which day, 6 hours later, occurred the moment of mean Mēsha-samkrānti (mean sun at 0°) at the beginning of Kaliyuga century 36, was, in notation in 10,000ths of the circle, 7715 352496330 The values of *a* for later century-beginnings are found by addition to this of the century increases of *a*, common and defective as required

EXAMPLES

Example 1 To find the European day, week-day, and phase of mean moon, i e the mean tithi-index a (which = t, the index) at mean sunrise of the first civil day of the luni-solar year, that is to say, of the day called "Chaitra śukla 1" of the year in question

[This example is given in order to enable any student to verify the entries in Table LXXVI, cols 19-23, For ordinary date work the entries themselves afford all information]

The mean new moon which marks the astronomical beginning of any mean lunar year is the new moon at the end of the lunar month Phālguna of the previous year The moment of its occurrence is always earlier than the moment in the current year of mean Mēsha-samkrānti, the beginning of the mean solar year The civil day next following the moment of the initial mean new moon of the year is called "Chaitra śukla 1," that tithi being current at mean sunrise of that civil day Our tabular calculations being for mean sunrise, the value of *a* in Table LXXVI, col 23, must always be between 0 and 333 3, the last being the limit of the tithi

To find its value for any year we must first calculate the value of *a* at mean sunrise on the day of occurrence of mean Mēsha-samkrānti from Tables LXXVIII and LXXIII (above) under heading *a*

This done there are two processes by which the mean sunrise value of *a* on the day Chaitra śukla 1 can be obtained One is to use Table LXIV, which, by *deducting* from the *a* of mean Mēsha-samkrānti-day mean sunrise (already found) the next lower value of *a* in the Table as given for the first 30 days, yields at once the interval of days between Chaitra śukla 1 and

Mēsha-samkrānti, the value of a at mean sunrise of the former, and the required week-day The second process is, using Table LXXIX, to find such earlier day as by *adding* its a to the a of Mēsha-samkrānti, already found, will yield a result between 0 and 333 3 The Table then shews the interval of days between the two sunrises, and the week-day corresponding to Chaitra śukla 1.

A. Take for instance the year K.Y. 3725 expired, A D 624-25. Mean Mēsha-samkrānti occurred in that year (*Table LXXVI, cols. 13-17*) on Wed 21 Mar ,—serial day 81, from Jan. 1. We take the value of a at mean sunrise at the beginning of the Kaliyuga century and at the beginning of the expired year from Tables LXXVIII and LXXIII respectively The result gives the value of a at mean sunrise of Mēsha samkrānti day in the given year

		w-d	a
(*Table LXXVIII*). K Y cent 37		(1)	6583 1816
(*Table LXXIII above*) K.Y year 25 . . .		(8)	2047 6413
At mean sunrise on Wed 21 Mar, the day of occurrence of mean Mēsha-samkrānti . . .		(4)	8630 8229

Process 1

	w-d	a
(*Table LXIV above*). Next lower value of a in the first 30 days of the Table, i e that for 25 days . .	−(4)	−8465 7968
At mean sunrise of the day Chaitra śukla 1 . .	(0)	165 0261

This Chaitra śukla 1 civil day was (81−25=) Day 56, or (*Table IX, Indian Calendar, or LXIX above*) Sat 25 Feb A D 624

Process 2

	w-d	a.
At mean sunrise on Wed 21 Mar, the day of mean Mēsha-samkrānti (*as above*)	(4)	8630 8229
(*Table LXXIX*) The only value of a which yields result between 0 and 333 3	+(3)	+1534 2032
At mean sunrise of the day Chaitra śukla 1 . .	(0)	165 0261

Table LXXIX shews that the interval of days was 25, and the result is in all respects the same as the former

B Calculation for the mean sunrise value of a on the day of mean Mēsha-samkrānti, the first step shewn in the above, by use of Tables LXXVIII and LXXIII sometimes results in the day found being not the actual day on which Mēsha-samkrānti took place but the day next to it This is inevitable, seeing that only one Table has to stand for the odd years of all centuries In such case the necessary adjustment must be made for one day's difference The entries in Table LXXVI, cols 13 to 17, are conclusive as to the actual day

Take the year A D. 625-26, K Y. 3726 expired, In that year mean Mēsha-samkrānti occurred on Thurs 21 Mar , serial day 80

		w-d	a
(*Table LXXVIII*) K Y century 37 . . .		(1)	6583 1816
(Table LXXIII) K Y year 26		(5)	5986·9072
At mean sunrise of Friday, 22 Mar		(6)	2570 0888
Deduct value for one day (*Table LXIV*) . . .		−(1)	−338 6319
At m. sunrise of Thurs 21 Mar, the day of mean Mēsha-samkranti		(5)	2231·4569

For the a of Chaitra śukla 1 and its day and week-day, we use either of the two processes.

<div align="center">Process 1</div>

	w-d	a
At m sunrise of m M. S -day, Thurs 21 Mar . .	(5)	2231 4569
(*Table LXIV above*) Next lower value of a in the first 30 days of the Table, viz for 6 days' interval . .	—(6)	—2031 7912
At mean sunrise of Fri. 15 Mar , being the day Chaitra śukla 1	(6)	199 6657

<div align="center">Or, Process 2</div>

	w-d	a.
At m sunrise of m Mēsha-samk day (*as above*) . .	(5)	2231 4569
Add (*Table LXXIX* for 6 days earlier) . . .	+ (1)	+7968 2088
Result (*same as above*)	(6)	199 6657

Example 2. To find the mean tithi-index a for any day in the year, or any moment of any day

Table LXXVI, cols 19-23, states the civil day, Chaitra śukla 1, for each year, its serial number from Jan 1, its week-day, and its tithi-index a at mean sunrise. Calculate, from Table III *Indian Calendar* or Table LXIII above, the interval of whole days to mean sunrise on the given day, and, if necessary, the fraction of day subsequent to that sunrise. Add the increment of a for whole days from Table LXIV, and for fractions of the day from Table LXV, to the a given in Table LXXVI

Whole numbers may always be used for whole days, the decimals being only resorted to for close cases and when the calculation includes a fraction of a day

E g Required the tithi-index at mean sunrise on Āshādha śukla 4 in the year corresponding to A D 625-26, and at 8^h 20^m 15^s after m sunrise on that day.

	d_1	w-d.	a.
Table LXXVI Chait śuk 1, mean sunrise .	(74)	(6)	199 6657
Tables LXIII A, LXIV Interval to Āsh śuk 4, and increase of a	(91)	(0)	815 5005
At mean sunrise on Āsh śuk 4 day . . .	(165)	(6)	1015·1662

Day 165 was (Table IX, *Indian Calendar*, or *Table LXIX above*) 14 June A D 625 (6)=Friday a=1015 shews (*Table VIII or LXVIII*) that śukla 4 was current at mean sunrise of that day

For the specific hour mentioned—

		a.
At mean sunrise on that day		1015·1662
(*Table LXV*)	8^h	112·8773
	20^m	4 7032
	15^s	0.0588
At 8^h 20^m 15^s after mean sunrise . . .	$a=$	1132 8055

Example 3 To find a (the tithi-index, or phase of mean moon) at each of the solar samkrāntis in the year (the moments of the mean sun's entrance into the several signs), and to determine whether an intercalation of a lunar month took place during the year

Table LXXVII, cols 13, 14, 17, shews the day and time of occurrence of mean Mésha-samkránti (mean sun at long ·0°) in each year, and Example 1 shows how to find the value of a at mean sunrise of that day. To that value must be added from Table LXV the increment of a during the interval from mean sunrise to moment of samkránti The advance of a during each mean solar month, i e from each mean samkránti to the next (*Table LXXVII, col 4*) is 307 3526 The work may be carried out by use of whole numbers, except when a case is very close. This occurs when a waning moon is very near 10,000, or when a waxing moon is very near 0

Required the above details for the years noted in Examples 1, 2, viz A D 624-5 and 625-6

In A D 624-25 mean Mésha-samkránti took place 14^h 2^m 30^s after mean sunrise In A.D 625-26 it took place 20^h 15^m 0^s after mean sunrise (*Table LXXVI, cols 13-17*)

	a
A D 624-25　Value of a at m sunrise on mean Mésha-samkránti-day, as already found (Example 1) . . .	8630 8229
(*Table LXV*).　Increase of a in 14^h	197 5353
Ditto　　2^m	0 4703
Ditto　　30^s	0 1176
Exact value of a at moment of mean Mésha-samkránti . .	8828 9461
A D 625-26　Value of a at m. sunrise of mean Mésha-samkránti-day as found	2231 4569
(*Table LXV*).　Increase of a in 20^h . . .	282 1932
Ditto　　15^m	3 5274
Exact value of a at moment of mean Mésha-samkránti . .	2517 1775

For the several samkrántis in each year we work here roughly with whole numbers only, adding successively the increase of a in 1 solar month

	A D 624-25	A D 625-26
At Mésha-samkr . .	$a=8829$	2517
	307	307
At Vrishabha-samkr. . .	9136	2824
	307	307
At Mithuna-samkr . .	9443	3131
	307	307
At Karka-samkr. . .	9750	3438
	307	307
At Simha-samkr . . .	57	3745
	etc.	etc

In A D 624-25 it is seen that the mean moon was waning at the Karka-samkránti and waxing at the Simha-samkránti, proving an intercalation of a lunar month, which month (*see Table LXXVII, col 1*) was Śrávaṇa Actually a at Simha samkránti was 58 36.

In A.D 625-26 the small value of a at the moment of Mēsha-samkrānti shews that there could have been no intercalation in that year (*see above*, § *306, xi*)

Example 4　To find the mean moon's nakshatra, or her place in the ecliptic circle at any moment

(*See* § *308 above*)　We have to find the value of s, the sun's mean long, at the given moment and the value at the same moment of a, the index of the mean tithi. $s + a = n$, the index of the nakshatra　I assume that, as usual, the values wanted are those at mean sunrise on the given day, for later moments they can easily be found, from Table LXV for a, and from Table LXXXI for s　The example here given will shew the process of work.

Required the nakshatra at mean sunrise on the day referred to in Example 2, viz　Āshādha śukla 4 in K Y 3726, which was proved to be 14 June A D　625, and on which day at mean sunrise the value of a was found to be 1015 1662　The day, measured from Jan 1, was serial number 165　In that year mean Mēsha-samkrānti took place (*Table LXXVI*) on Day 80 at 20^h 15^m after mean sunrise　The interval of whole days between 20^h 15^m after mean sunrise on the day of Mēsha-samkrānti and 20^h 15^m after mean sunrise on the given day is $(165-80=)$ 85.

			s
(*Table LXXX*)　Interval of 85 days　. 　.　.　.　.　.			2327 1179
Less (*Table LXXXI*) for 20^h　.　.　.	22 8149		
for 15^m　.　.	0 2852		
	23·1001	.　.	−23 1001
At mean sunrise on the day Āshādha śuk　4,　.　.　.			s=2304 0178
Add a, as found for that mean sunrise　.　.　.　.　.			1015·1662
At mean sunrise on that day (=14 June)　.　.　.			n=3319 1840

Table VIII *Indian Calendar*, or Table LXVIII above, shews that the moon was then in the nakshatra Āślēshā by the equal-space system and by Garga, but in Maghā by the Brāhma Siddhānta [1]

The value of n, 3319 1840, in 10,000ths of the circle, can be converted into degrees, if required, by Table XLV B, above.　It = 119° 29′ 26″　That was the mean moon's place

Example 5　The lagna.　(See Indian Chronography, § 193, p 74, and Example 63, p 127)
Required to ascertain at what hour on the day Āshādha śuk 4 K Y 3726, or 14 June A D. 625, the sign Tulā became lagna

At mean sunrise the sun's mean long s was (*Example 4*) 2304 0178, roughly (*Table XLV above*) 82° 57′　The first point of Tulā (Libra) (*Indian Chronography, Table XXII*) is 180°. 180° − 82° 57′ = 97° 3′　97° × 4 = 388^m, or 6^h 28^m. 3′ × 4 = 12^s　The first point of Tulā, therefore, was lagna at 6^h 28^m 12^s after mean sunrise on the day in question.　It lasted for 2 hours, when Vṛiśchika (Scorpio) became lagna

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[1] As to these systems see *Indian Calendar*, § 38, p. 21 ; *Indian Chronography*, § 112 etc.

TABLE LXXVI.

Mean System Table, First Arya Siddhānta.

(Cols. 1 to 4)—The years herein stated are the *current* years corresponding

(Cols. 6 and 7)—*Samvatsara-names of mean solar years in italics shew where*

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month
						JOVIAN SAMVATSARA		
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D.	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3601	422	557			499 500	9 Yuvan	.	9 Mārgaśira .
3602	423	558			*500-0)	10 Dhātri	.	..
3603	424	559			501-02	11 Īśvara .	.	..
3604	425	560			502 03	12 Bahudhānya	.	5 Śrāvaṇa .
3605	426	561			503-04	13 Pramāthin	.	...
3606	427	562			*504-05	14 Vikrama	.	.
3607	428	563			505-06	15 Vrisha .	.	2 Vaiśākha .
3608	429	564			506-07	16 Chitrabhānu	.	.
3609	430	565			507-08	17 Subhānu .	.	10 Pausha .
3610	431	566			*508-09	18 Tāraṇa .	.	.
3611	432	567			509-10	19 Pārthiva .	.	...
3612	433	568			510 11	20 Vyaya .	.	7 Āśvina .
3613	434	569			511-12	21 Sarvajit .	.	
3614	435	570			*512-13	22 Sarvadhārin	.	..
3615	436	571			513-14	23 Virōdhin .	.	3 Jyēshṭha .
3616	437	572			514-15	24 Vikrita .	.	
3617	438	573			515-16	25 Khara .	.	12 Phālguna .
3618	439	574			*516-17	26 Nandana .	.	..
3619	440	575			517-18	27 Vijaya .	.	..
3620	441	576			518-19	28 Jaya .	.	8 Kārttika .

LXXVI.

Fipst Ārya Siddhānta

to Table I, " Indian Calendar."

to the A D years in col 5 , as in Table I, " Indian Calendar."

differences exist from Sūrya Siddhanta nomenclature in true solar years.

1 Arya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).			Kali year.
Day and month, A D	Week day	Time of mean Mesha-samkrānti.	Day and month, A. D.	Week day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
		H. M S				
21 Mar (80) .	1 Sun.	6 0 0	27 Feb (58)	0 Sat.	205 4513	3601
20 Mar (80) .	2 Mon	12 12 30	17 Mar (77)	6 Fri	300 0909	3602
20 Mar. (79) .	3 Tues	18 25 0	6 Mar (65)	3 Tues	175 7743	3603
21 Mar (80) .	5 Thur	0 37 30	23 Feb (54)	0 Sat	51 4577	3604
21 Mar (80)	6 Fri	6 50 0	14 Mar (73)	6 Fri	86 0973	3605
20 Mar. (80) .	0 Sat.	13 2 30	3 Mar (63)	4 Wed	300 4125	3606
20 Mar (79) .	1 Sun	19 15 0	20 Feb (51)	1 Sun	176 0959	3607
21 Mar (80)	3 Tues	1 27 30	11 Mar (70)	0 Sat.	210 7356	3608
21 Mar (80) .	4 Wed	7 40 0	28 Feb. (59)	4 Wed.	86 4189	3609
20 Mar (80) .	5 Thur	13 52 30	18 Mar (78)	3 Tues	121 0586	3610
20 Mar (79) .	6 Fri	20 5 0	7 Mar (66)	0 Sat	9996 7419†	3611
21 Mar (80)	1 Sun	2 17 30	25 Feb (56)	5 Thur	211 0572	3612
21 Mar (80) .	2 Mon	8 30 0	16 Mar (75)	4 Wed	245 6968	3613
20 Mar (80)	3 Tues	14 42 30	4 Mar (64)	1 Sun	121 3802	3614
20 Mar (79) .	4 Wed	20 55 0	21 Feb (52)	5 Thur	9997 0635†	3615
21 Mar (80) .	6 Fri	3 7 30	12 Mar (71)	4 Wed	31 7031	3616
21 Mar (80) .	0 Sat	9 20 0	2 Mar. (61)	2 Mon	246 0185	3617
20 Mar (80) .	1 Sun	15 32 30	20 Mar (80)	1 Sun	280 6581	3618
20 Mar (79) .	2 Mon.	21 45 0	9 Mar (68)	5 Thur	156 3414	3619
21 Mar (80) .	4 Wed.	3 57 30	26 Feb (57)	2 Mon	32 0248	3620

† As a mean titoi Chaitra Sukla 1 was suppressed   The civil day corresponding to it, i e , the first day of the mean luni solar year, was as given in cols. 19, 20.

TABLE

CONCURRENT YEAR						JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
Kalı	Saka	Chaıtrādı Vıkrnma	Mēshādı sohr year in Bengal	Kollam	A D.	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3021	442	577			519 20	29 Manmatha		
3022	443	578			*520 21	30 Durmukha		.
3023	444	579			521 22	31 Hīmalamba .		5 Śrāvana .
3624	415	580			522 23	32 Vılamba		.
3025	446	581			523 24	33 Vıkārın .		.
3026	447	582			*524 25	34 Śārvarın .		1 Chaitra .
3027	448	583			525 26	35 Plava . .		.
3028	449	584			526 27	36 Śubhakrıt		10 Pausha .
3629	450	585			527-28	37 Śōbhana		..
3630	451	586			*528 29	38 Krōdhın . .		.
3031	152	587			529 30	39 Vıśvāvasu		7 Āśvına .
3032	453	588			530 31	40 Parābhava . .		.
3033	454	589			531 32	41 Plavaoga . . .		.
3031	455	590			*532 33	42 Kīlaka . . .		3 Jyēshṭba .
3035	456	591			533 34	43 Saumya . . .		
3636	157	592			534 35	44 Sādhārana . .		12 Phālguna .
3637	458	593			535 36	45 Vırōdhakrıt . .		..
3638	459	594			*536 37	46 Parıdhāvın .		..
3039	460	595			537 38	47 Pramādın . .		8 Kārttıka .
3540	461	596			538 39	48 Ānanda . .		. .
3641	462	597			539 40	49 Rākshasa . .		..
3542	463	598			*540 41	50 Anala . .		5 Śrāvaṇa .
3543	464	599			541-42	51 Pıngala . . .		.. .
3544	465	600			542 43	52 Kālayukta . .		..
3545	466	601			543 44	53 Sıddhārthın . .		1 Chaitra .

LXXVI—*Contd.*

1 Árya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year.
Day and month, A D	Week day	Time of mean Maha-samkrānti	Day and month, A D	Week-day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
21 Mar (80)	5 Thur	10 10 0	17 Mar (76)	1 Sun	66 6644	3621
20 Mar (80) .	6 Fri	16 22 30	6 Mar (66) .	6 Fri .	280 9797	3622
20 Mar (79) . .	0 Sat .	22 35 0	23 Feb (54)	3 Tues	156 6631	3623
21 Mar (80)	2 Mon .	4 47 30	14 Mar (73) .	2 Mon	191 3027	3624
21 Mar. (80)	3 Tues	11 0 0	3 Mar (62) .	0 Fri	66 9860	3625
20 Mar (80)	4 Wed	17 12 30	21 Feb (52) .	4 Wed	281 3013	3626
20 Mar (79)	5 Thur	23 25 0	11 Mar (70)	3 Tues	315 9409	3627
21 Mar (80) . .	0 Sat	5 37 30	28 Feb (59) .	0 Sat	191 6243	3628
21 Mar (80) .	1 Sun .	11 50 0	10 Mar (78)	6 Fri	226 2040	3629
20 Mar (80) .	2 Mon.	18 2 30	7 Mar (67)	3 Tues	101 9473	3630
21 Mar (80) . .	4 Wed	0 15 0	25 Feb (56) .	1 Sun	316 2626	3631
21 Mar (80) . .	5 Thur	6 27 30	16 Mar (74)	6 Fri .	12 2703	3632
21 Mar. (80) .	6 Fri .	12 40 0	5 Mar (64)	4 Wed	220 5850	3633
20 Mar (80) .	0 Sat	18 52 30	22 Feb (53)	1 Sun	102 2690	3634
21 Mar (80) .	2 Mon .	1 5 0	12 Mar (71) .	0 Sat	136 9086	3635
21 Mar (80)	3 Tues	7 17 30	1 Mar (60)	4 Wed .	12·5920	3636
21 Mar (80)	4 Wed	13 30 0	20 Mar (79)	3 Tues .	47·2316	3637
20 Mar (80) .	5 Thur	19 42 30	9 Mar (69)	1 Sun	261 5409	3638
21 Mar. (80)	0 Sat	1 55 0	26 Feb (57) .	5 Thur.	137 2303	3639
21 Mar (80) .	1 Sun .	8 7 30	17 Mar (76)	4 Wed .	171 8699	3640
21 Mar (80)	2 Mon	14 20 0	6 Mar (65) .	1 Sun	47 5533	3641
20 Mar (80) .	3 Tues	20 32 30	24 Feb (55)	6 Fri .	261 8686	3642
21 Mar (80) .	5 Thur.	2 45 0	14 Mar (73)	5 Thur .	206 5082	3643
21 Mar (80) . .	6 Fri	8 57 30	3 Mar (62)	2 Mon .	172 1916	3644
21 Mar (80) .	0 Sat.	15 10 0	20 Feb (51)	6 Fri .	47 8749	3645

TABLE

						JOVIAN SAMVATSARA.		Mean Intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3646	467	602			*544 45	54 Raudra	• •	
3647	468	603			545 46	55 Durmati		10 Pausha
3648	469	604			546 47	56 Dundubhi	•	
3649	470	605			547-48	57 Rudhirōdgārin		
3650	471	606			*548 49	58 Raktīksha	• •	6 Bhādrapada
3651	472	607			549 50	59 Krōdhana	•	
3652	473	608			550 51	60 Kshaya		•
3653	474	609			551-52	1 Prabhava		3 Jyēshtha
3654	475	610			*552-53	2 Vibhava	•	
3655	476	611			553 54	3 Śukla	• •	11 Māgha
3656	477	612			554 55	4 Pramōda	•	..
3657	478	613			555 56	5 Prajāpati	•	
3658	479	614			*556-57	6 Angiras	• • •	8 Kārttika
3659	480	615			557 58	7 Śrīmukha	• •	
3660	481	616			558 59	8 Bhāva	• •	
3661	482	617			559 60	9 Yuvan	•	4 Āshādha
3662	483	618			*560 61	10 Dhātri	• •	
3663	484	619			561 62	11 Īsvara	•	
3664	485	620			562 63	12 Bahudhānya	• •	1 Chaitra
3665	486	621			563-64	13 Pramāthin†	• •	
3666	487	622			*564 65	15 Vrisha	•	10 Pausha
3667	488	623			565 66	16 Chitrabhānu	•	
3668	489	624			566 67	17 Subhānu •	•	
3669	490	625			567 68	18 Tārana	•	6 Bhādrapada.
3670	491	626			*568 69	19 Pārthiva	• •	..

† By I Ārya Siddhānta *mean* system 14 Vikrama was expunged, and A D 564 65 corresponded to 15 Vrisha. By the same authority *true* system A D 564 65 corresponded to 14 Vikrama, and 15 Vrisha was expunged A D 565 66 was 16 Chitrabhānu by both systems

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kalı year.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week day	a (here$=t$, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
20 Mar (80) .	1 Sun. .	21 22 30	10 Mar (70)	5 Thur	82 5145	3646
21 Mar (80) .	3 Tues .	3 35 0	28 Feb (59)	3 Tues	296 8298	3647
21 Mar (80) .	4 Wed .	9 47 30	19 Mar (78) .	2 Mon	331 4694	3648
21 Mar (80)	5 Thur .	16 0 0	8 Mar (67)	6 Fri	207 1528	3649
20 Mar (80) .	6 Fri	22 12 30	25 Feb (56)	3 Tues	82 8361	3650
21 Mar (80)	1 Sun	4 25 0	15 Mar (74)	2 Mon	117 4757	3651
21 Mar (80)	2 Mon	10 37 30	5 Mar (64)	0 Sat	331 7910	3652
21 Mar (80) .	3 Tues.	16 50 0	22 Feb (53)	4 Wed	207 4744	3653
20 Mar (80)	4 Wed.	23 2 30	12 Mar (72)	3 Tues	242 1140	3654
21 Mar (80) .	6 Fri .	5 15 0	1 Mar (60)	0 Sat	117 7974	3655
21 Mar (80)	0 Sat .	11 27 30	20 Mar (79) .	6 Fri	152 4370	3656
21 Mar (80) .	1 Sun. .	17 40 0	9 Mar (68)	3 Tues	28 1204	3657
20 Mar (80) .	2 Mon. .	23 52 30	27 Feb (58) .	1 Sun	242 4357	3658
21 Mar (80) .	4 Wed. .	6 5 0	17 Mar (76) .	0 Sat .	277·0753	3659
21 Mar (80) .	5 Thur.	12 17 30	6 Mar (65)	4 Wed	152 7587	3660
21 Mar (80) .	6 Fri .	18 30 0	23 Feb (54) .	1 Sun	28 4421	3661
21 Mar (81)	1 Sun .	0 42 30	13 Mar (73)	0 Sat .	63 0817	3662
21 Mar. (80) .	2 Mon. .	6 55 0	3 Mar (62) .	5 Thur .	277 3970	3663
21 Mar. (80) .	3 Tues .	13 7 30	20 Feb (51)	2 Mon	153 0803	3664
21 Mar (80)	4 Wed.	19 20 0	11 Mar (70) .	1 Sun	187 7200	3665
21 Mar (81) .	6 Fri. .	1 32 30	28 Feb (59)	5 Thur	63 4034	3666
21 Mar (80) .	0 Sat .	7 45 0	18 Mar (77) .	4 Wed	98·0430	3667
21 Mar (80) .	1 Sun. .	13 57 30	8 Mar (67)	2 Mon	312 3582	3668
21 Mar (80)	2 Mon. .	20 10 0	25 Feb (56)	6 Fri	188 9416	3669
21 Mar (81) .	4 Wed. .	2 22 30	15 Mar. (75)	5 Thur	222 6813	3670

CONCURRENT YEAR						JOVIAN SAMVATSARA.		Mean Intercalated (adhıka) lunar month
Kalı	Śaka	Chaıtrādı Vikrama	Mēshādı solar year ın Bengal	Kollam	A D.	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3671	492	627			569-70	20 Vɟaya		3 Jyēshtha
3672	493	628			570 71	21 Sarvaɟıt		
3673	494	629			571-72	22 Sarvadhārın		
3674	495	630			*572-73	23 Vırōdhın		11 Māgha
3675	496	631			573 74	24 Vıkrıta		
3676	497	632			574-75	25 Khara		
3677	498	633			575 76	26 Nandana		8 Kārttıka
3678	499	634			*576 77	27 Vıjaya		
3679	500	635			577-78	28 Jaya		4 Āshādha
3680	501	636			578 79	29 Manmatha		
3681	502	637			579 80	30 Durmukha		
3682	503	638			*580-81	31 Hēmalamba		1 Chaıtra
3683	504	639			581-82	32 Vılamba		
3684	505	640			582-83	33 Vıkārın		9 Mārgaśıra
3685	506	641			583-84	34 Śārvarın		
3686	507	642			*584 85	35 Plava		
3687	508	643			585 86	36 Śubhakṛıt		6 Bhādrapada
3688	509	644			586 87	37 Śōbhana		
3689	510	645			587-88	38 Krōdhın		..
3690	511	646			*588 89	39 Vıśvāvasu		...
3691	512	647			589 90	40 Parābhava		2 Vaıśākha
3692	513	648			590-91	41 Plavanga		...
3693	514	649			591-92	42 Kīlaka		11 Māgha
3694	515	650			*592-93	43 Saumɟa		...
3695	516	651			593 94	44 Sādhāraṇa		...

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1 Ārya Siddhānta, mean system.

MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year.
Day and month, A D	Week day.	Time of mean Mēsha saṃkrānti	Day and month, A D	Week day	*a* (here=*t* the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
21 Mar (80)	5 Thur	8 35 0	4 Mar (63)	2 Mon	98 3646	3671
21 Mar (80)	6 Fri	14 47 30	22 Feb (53)	0 Sat	312 6799	3672
21 Mar (80)	0 Sat	21 0 0	12 Mar (71)	5 Thur	8 6876	3673
21 Mar (81)	2 Mon	3 12 30	1 Mar (61)	3 Tues	223 0029	3674
21 Mar (80)	3 Tues	9 25 0	20 Mar (79)	2 Mon	257 6425	3675
21 Mar, (80)	4 Wed	15 37 30	9 Mar (68)	6 Fri	133 3259	3676
21 Mar (80)	5 Thur	21 50 0	26 Feb (57)	3 Tues	9 0092	3677
21 Mar (81)	0 Sat	4 2 30	16 Mar (76)	2 Mon	43 6488	3678
21 Mar (80)	1 Sun	10 15 0	6 Mar (65)	0 Sat	257 9641	3679
21 Mar (80)	2 Mon	16 27 30	23 Feb (54)	4 Wed	133 6476	3680
21 Mar. (80)	3 Tues	22 40 0	14 Mar (73)	3 Tues	168 2871	3681
21 Mar. (81)	5 Thur	4 52 30	2 Mar (62)	0 Sat	43 9705	3682
21 Mar. (80)	6 Fri	11 5 0	20 Feb (51)	5 Thur.	258 2857	3683
21 Mar (80)	0 Sat	17 17 30	11 Mar (70)	4 Wed	292 9254	3684
21 Mar (80)	1 Sun	23 30 0	28 Feb (59)	1 Sun	168 6087	3685
21 Mar (81)	3 Tues	5 42 30	18 Mar (78)	0 Sat	203 2484	3686
21 Mar (80)	4 Wed	11 55 0	7 Mar (66)	4 Wed	78 9317	3687
21 Mar (80)	5 Thur	18 7 30	25 Feb (56)	2 Mon	293 2470	3688
22 Mar (81)	0 Sat	0 20 0	16 Mar (75)	1 Sun	327 8867	3689
21 Mar (81)	1 Sun	6 32 30	4 Mar (64)	5 Thur	203 5700	3690
21 Mar (80)	2 Mon	12 45 0	21 Feb (52)	2 Mon	79 2534	3691
21 Mar (80)	3 Tues	18 57 30	12 Mar (71)	1 Sun	113 8930	3692
22 Mar (81)	5 Thur	1 10 0	2 Mar (61)	6 Fri	328 2083	3693
21 Mar (81)	6 Fri.	7 22 30	19 Mar (79)	4 Wed	24 2160	3694
21 Mar (80)	0 Sat	13 35 0	9 Mar (68)	2 Mon	238 5313	3695

TABLE

			CONCURRENT YEAR					
Kalı.	Śaka	Chaitrādı Vikrama	Mēshādi solar year in Bengal	Kollam	A D.	Jovian samvatsara.		Mean Intercalated (adhika) lunar month.
						Southern system.	Northern system	
ı	2	3	3a	4	5	6	7	8a
3696	517	652	1		594-95	45 Vırōdhakṛıt • •		7 Āśvina
3697	518	653	2		595 96	46 Parıdhāvın • •		...
3698	519	654	3		*596 97	47 Pramādın • •		• •
3699	520	655	4		597-98	48 Ānanda • •		4 Āshādha •
3700	521	656	5		598 99	49 Rākshasa • • •		•
3701	522	657	6		599 600	50 Anala • •		12 Phālguna •
3702	523	658	7		*600-01	51 Pıṅgala • • •		••
3703	524	659	8		601 02	52 Kālayukta • •		• •
3704	525	660	9		602 03	53 Sıddhārthın •		9 Mārgaśıra •
3705	526	661	10		603 04	54 Raudra • • •		...
3706	527	662	11		*604 05	55 Durmati • •		• •
3707	528	663	12		605-06	56 Dundubhı • •		6 Bhādrapada.
3708	529	664	13		606 07	57 Rudhırōdgārín. •		••
3709	530	665	14		607-08	58 Raktāksha • •		...
3710	531	666	15		*608 09	59 Krōdhana • •		2 Vaısākha •
3711	532	667	16		609-10	60 Kshaya • • •		...
3712	533	668	17		610-11	1 Prabhava • • •		11 Māgha •
3713	534	669	18		611-12	2 Vıbhava • • •		• •
3714	535	670	19		*612-13	3 Śūkla • • •		...
3715	536	671	20		613-14	4 Pramōda • • •		7 Āśvına •
3716	537	672	21		614-15	5 Prajāpatı • • •		...
3717	538	673	22		615-16	6 Aṅgıras • • •		• •
3718	539	674	23		*616-17	7 Śrīmukha • •		4 Āshādha •
3719	540	675	24		617-18	8 Bhāva • • •		...
3720	541	676	25		618-19	9 Yuvan • • •		12 Phālguna

LXXVI—*Contd.*

1 Árya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year.
Day and month, A D	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A. D.	Week-day.	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S.				
21 Mar (80) .	1 Sun .	19 47 30	26 Feb (57) .	6 Fri. .	114 2147	3696
22 Mar. (81) .	3 Tues .	2 0 0	17 Mar. (76) .	5 Thur. .	148 8543	3697
21 Mar. (81) .	4 Wed .	8 12 30	5 Mar (65) .	2 Mon. .	24 5377	3698
21 Mar (80) .	5 Thur .	14 25 0	23 Feb (54) .	0 Sat. .	238 8530	3699
21 Mar. (80) .	6 Fri. .	20 37 30	14 Mar. (73) .	6 Fri .	273 4926	3700
22 Mar (81) .	1 Sun. .	2 50 0	3 Mar (62) .	3 Tues. .	149 1760	3701
21 Mar (81) .	2 Mon. .	9 2 30	21 Mar (81) .	2 Mon. .	183 8156	3702
21 Mar. (80) .	3 Tues .	15 15 0	10 Mar (69) .	6 Fri. .	59 4990	3703
21 Mar. (80) .	4 Wed. .	21 27 30	28 Feb. (59) .	4 Wed. .	273 8142	3704
22 Mar. (81) .	6 Fri. .	3 40 0	19 Mar. (78) .	3 Tues. .	308 4539	3705
21 Mar. (81) .	0 Sat. .	9 52 30	7 Mar (67) .	0 Sat. .	184 1373	3706
21 Mar. (80) .	1 Sun. .	16 5 0	24 Feb (55) .	4 Wed .	59 8207	3707
21 Mar. (80) .	2 Mon. .	22 17 30	15 Mar. (74) .	3 Tues. .	94 4603	3708
22 Mar. (81) .	4 Wed. .	4 30 0	5 Mar (64) .	1 Sun. .	308 7756	3709
21 Mar (81) .	5 Thur .	10 42 30	22 Feb. (53) .	5 Thur. .	184 4589	3710
21 Mar. (80) .	6 Fri .	16 55 0	12 Mar (71) .	4 Wed. .	219 0985	3711
21 Mar (80) .	0 Sat. .	23 7 30	1 Mar (60) .	1 Sun. .	94·7819	3712
22 Mar (81) .	2 Mon. .	5 20 0	20 Mar (79) .	0 Sat. .	129·4215	3713
21 Mar. (81) .	3 Tues .	11 32 30	8 Mar (68) .	4 Wed. .	5 1049	3714
21 Mar (80) .	4 Wed. .	17 45 0	26 Feb (57) .	2 Mon. .	219·4201	3715
21 Mar. (80) .	5 Thur .	23 57 30	17 Mar (76) .	1 Sun. .	254·0597	3716
22 Mar (81) .	0 Sat .	6 10 0	6 Mar (65) .	5 Thur. .	129 7432	3717
21 Mar (81)	1 Sun. .	12 22 30	23 Feb (54) .	2 Mon .	5·4266	3718
21 Mar (80) .	2 Mon .	18 35 0	13 Mar (72) .	1 Sun. .	40·0661	3719
22 Mar. (81) .	4 Wed .	0 47 30	3 Mar. (62) .	6 Fri. .	254 3814	3720

TABLE

CONCURRENT YEAR						JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
Kalı	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D	Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
3721	542	677	26		619 20	10 Dhātṛı		..
3722	543'	678	27		*620-21	11 Iśvara		..
3723	544	679	28		621-22	12 Bahudhānya		9 Mārgaśıra .
3724	545	680	29		622-23	13 Pramāthın		.
3725	546	681	30		623-24	14 Vıkrama		.
3726	547	682	31		*624-25	15 Vṛısha		5 Śrāvana .
3727	548	683	32		625-26	16 Chıtrabhānu		...
3728	549	684	33		626 27	17 Subhānu		..
3729	550	685	34		627-28	18 Tāraṇa		2 Vaıśākha .
3730	551	686	35		*628-29	19 Pārthıva		..
3731	552	687	36		629 30	20 Vyaya		10 Pausha
3732	553	688	37		630 31	21 Sarvajıt		...
3733	554	689	38		631-32	22 Sarvadhārın		...
3734	555	690	39		*632 33	23 Virōdhın		7 Āśvına .
3735	556	691	40		633-34	24 Vıkrıta		..
3736	557	692	41		634-35	25 Khara		..
3737	558	693	42		635 36	26 Nandana		3 Jyēshṭha .
3738	559	694	43		*636 37	27 Vıjaya		.
3739	560	695	44		637-38	28 Jaya		12 Phālguna .
3740	561	696	45		638-39	29 Manmatha		..
3741	562	697	46		639 40	30 Durmukha		..
3742	563	698	47		*640-41	31 Hēmalamba		9 Mārgaśıra .
3743	564	699	48		641-42	32 Vılamba		...
3744	565	700	49		642-43	33 Vıkārın		...
3745	566	701	50		643-44	34 Sārvarın		5 Śrāvaṇa .

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I Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kalı year
Day and month, A D	Week-day.	Time of mean Mésha-samkrānti	Day and month, A.D	Week-day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M. S				
22 Mar. (81) .	5 Thur.	7 0 0	22 Mar (81)	5 Thur.	289 0209	3721
21 Mar (81) .	6 Frı.	13 12 30	10 Mar. (70)	2 Mon.	164 7044	3722
21 Mar (80) .	0 Sat	19 25 0	27 Feb (58)	6 Fri.	40 3877	3723
22 Mar (81)	2 Mon.	1 37 30	18 Mar (77)	5 Thur	75 0274	3724
22 Mar (81) .	3 Tues	7 50 0	8 Mar (67)	3 Tues	289 3427	3725
21 Mar. (81) .	4 Wed.	14 2 30	25 Feb (56)	0 Sat.	165 0261	3726
21 Mar. (80) .	5 Thur.	20 15 0	15 Mar (74)	6 Fri	199 6657	3727
22 Mar (81) .	0 Sat	2 27 30	4 Mar (63)	3 Tues.	75 3491	3728
22 Mar (81) .	1 Sun	8 40 0	22 Feb (53)	1 Sun	289 6643	3729
21 Mar (81) .	2 Mon.	14 52 30	12 Mar (72)	0 Sat	324 3039	3730
21 Mar. (80) .	3 Tues	21 5 0	1 Mar (60)	4 Wed.	199 9873	3731
22 Mar. (81) .	5 Thur.	3 17 30	20 Mar (79)	3 Tues	234 6269	3732
22 Mar (81) .	6 Frı	9 30 0	9 Mar (68)	0 Sat.	110 3103	3733
21 Mar (81) .	0 Sat	15 42 30	27 Feb (58)	5 Thur	324 6256	3734
21 Mar (80) .	1 Sun	21 55 0	16 Mar (75)	3 Tues	20 6333	3735
22 Mar (81) .	3 Tues.	4 7 30	6 Mar (65)	1 Sun	234 9486	3736
22 Mar (81) .	4 Wed	10 20 0	23 Feb (54)	5 Thur.	110 6320	3737
21 Mar (81) .	5 Thur.	16 32 30	13 Mar. (73)	4 Wed	145 2716	3738
21 Mar (80) .	6 Frı.	22 45 0	2 Mar (61)	1 Sun	20 9550	3739
22 Mar (81) .	1 Sun.	4 57 30	21 Mar (80)	0 Sat	55 5946	3740
22 Mar (81) .	2 Mon.	11 10 0	11 Mar (70)	5 Thur.	269 9099	3741
21 Mar. (81) .	3 Tues.	17 22 30	28 Feb (59)	2 Mon	145 5933	3742
21 Mar. (80) .	4 Wed.	23 35 0	18 Mar (77)	1 Sun	180 2329	3743
22 Mar. (81) .	6 Frı.	5 47 30	7 Mar. (66)	5 Thur	55 9163	3744
22 Mar. (81) .	0 Sat.	12 0 0	25 Feb (56)	3 Tues	270 2316	3745

						Jovian samvatsara.		Mean Intercalated (adhıka) lunar month
Kalı	Śaka	Chaitrādı Vikrama	Mēshādı solar year in Bengal	Kollam	A.D	Southern system	Northern system.	
1	2	3	3a	4	5	6	7 .	8a
3746	567	702	51		*644 45	35 Plava		..
3747	568	703	52		645-46	36 Śubhakṛıt		...
3748	569	704	53		646 47	37 Śōbhana		2 Vaısākha
3749	570	705	54		647-48	38 Krōdhın		.
3750	571	706	55		*648 49	39 Vıśvāvasu		10 Pausha
3751	572	707	56		649-50	40 Parābhava†		...
3752	573	708	57		650 51	42 Kılala		...
3753	574	709	58		651 52	43 Saumya		7 Āśvına
3754	575	710	59		*652 53	44 Sādhārana		..
3755	576	711	60		653 54	45 Vırōdhakṛıt		...
3756	577	712	61		654 55	46 Parıdhāvın		3 Jyɛ̄shṭha
3757	578	713	62		655 56	47 Pramādın		..
3758	579	714	63		*656 57	48 Ānanda		12 Phālguna
3759	580	715	64		657-58	49 Rākshaṣa		..
3760	581	716	65		658 59	50 Ænala		.
3761	582	717	66		659 60	51 Pıngala		8 Kārttıka
3762	583	718	67		*660 61	52 Kālayukta		...
3763	584	719	68		661-62	53 Sıddhārthın		..
3764	585	720	69		662-63	54 Raudra		5 Śrāvaṇa
3765	586	721	70		663 64	55 Durmatı		...
3766	587	722	71		*664 65	56 Dundubhı		...
3767	588	723	72		665 66	57 Rudhırōdgārın		1 Chaitra
3768	589	724	73		666 67	58 Raktāksha		..
3769	590	725	74		667-68	59 Krōdhana		10 Pausha
3770	591	726	75		*668-69	60 Kshaya		...

† By the mean system 41 Plavanga was expunged, as also by the true system.

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and month, A D	Week day	Time of mean Mēsha-samkrānti	Day and month, A D	Week day	*a* (here=*t*, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
21 Mar (81) .	1 Sun .	18 12 30	15 Mar (75)	2 Mon	304 8711	3746
22 Mar (81) . .	3 Tues	0 25 0	4 Mar (63)	6 Fri	180 5545	3747
22 Mar (81) . .	4 Wed	6 37 30	21 Feb (52)	3 Tues	56 2378	3748
22 Mar (81) .	5 Thur.	12 50 0	12 Mar. (71)	2 Mon .	90 8775	3749
21 Mar (81) . .	6 Fri .	19 2 30	1 Mar (61) .	0 Sat	305 1927	3750
22 Mar. (81) . .	1 Sun .	1 15 0	19 Mar. (78)	5 Thur .	1 2005	3751
22 Mar (81) . .	2 Mon .	7 27 30	9 Mar (68) .	3 Tues	215 5157	3752
22 Mar (81) .	3 Tues	13 40 0	26 Feb (57) .	0 Sat	91 1991	3753
21 Mar (81) .	4 Wed.	19 52 30	16 Mar (76) .	6 Fri	125 8387	3754
22 Mar (81) . .	6 Fri	2 5 0	5 Mar (64) .	3 Tues	1 5221	3755
22 Mar (81) . .	0 Sat .	8 17 30	23 Feb (54) .	1 Sun	215 8374	3756
22 Mar (81) . .	1 Sun .	14 30 0	14 Mar (73) .	0 Sat	250 4770	3757
21 Mar (81) .	2 Mon .	20 42 30	2 Mar (62) .	4 Wed .	126 1604	3758
22 Mar (81) . .	4 Wed	2 55 0	21 Mar (80) .	3 Tues.	160 8000	3759
22 Mar (81) . .	5 Thur .	9 7 30	10 Mar (69) .	0 Sat.	36 4834	3760
22 Mar (81) . .	6 Fri .	15 20 0	28 Feb (59) .	5 Thur	250 7987	3761
21 Mar (81) . .	0 Sat .	21 32 30	18 Mar (78) .	4 Wed .	285 4383	3762
22 Mar (81) . .	2 Mon. .	3 45 0	7 Mar (66) .	1 Sun	161 1217	3763
22 Mar. (81) . .	3 Tues	9 57 30	24 Feb (55) .	5 Thur .	36 8051	3764
22 Mar. (81) .	4 Wed .	16 10 0	15 Mar (74) .	4 Wed.	71 4447	3765
21 Mar (81) . .	5 Thur .	22 22 30	4 Mar (64) .	2 Mon	285 7599	3766
22 Mar (81) . .	0 Sat .	4 35 0	21 Feb (52) .	6 Fri. .	161 4433	3767
22 Mar (81) . .	1 Sun .	10 47 30	12 Mar (71) .	5 Thur	196 0830	3768
22 Mar (81) . .	2 Mon .	17 0 0	1 Mar (60) .	2 Mon .	71 7663	3769
21 Mar (81) .	3 Tues	23 12 30	18 Mar (78) .	1 Sun	106 4060	3770

TABLE

CONCURRENT YEAR						JOVIAN SAṀVATSARA		Mean Intercalated (adhika) lunar month
Kali	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3771	592	727	76		669-70	1 Prabhava	.	..
3772	593	728	77		670 71	2 Vibhava	. .	6 Bhādrapada
3773	594	729	78		671 72	3 Śukla	.	
3774	595	730	79		*672-73	4 Pramōda	.	..
3775	596	731	80		673-74	5 Prajāpati	. .	3 Jyēshtha .
3776	597	732	81		674 75	6 Angiras	. .	.
3777	598	733	82		675 76	7 Śrīmukha .	.	11 Māgha .
3778	599	734	83		*676-77	8 Bhāva	. .	
3779	600	735	84		677-78	9 Yuvan		
3780	601	736	85		678 79	10 Dhātri	. .	8 Kārttika .
3781	602	737	86		679-80	11 Iśvara		
3782	603	738	87		*680 81	12 Bahudhānya	.	.
3783	604	739	88		681-82	13 Pramāthin		5 Srāvana
3784	605	740	89		682 83	14 Vikrama .		
3785	606	741	90		683-84	15 Vrisha	. .	...
3786	607	742	91		*684 85	16 Chitrabhānu	.	1 Chaitra .
3787	608	743	92		685 86	17 Subhānu .	. .	
3788	609	744	93		686 87	18 Tāraṇa	. .	10 Pausha
3789	610	745	94		687-88	19 Pārthiva .		
3790	611	746	95		*688 89	20 Vyaya	. .	
3791	612	747	96		689 90	21 Sarvajit .	. .	6 Bhādrapada
3792	613	748	97		690 91	22 Sarvadhārin	.	
3793	614	749	98		691 92	23 Virōdhin	.	.
3794	615	750	99		*692 93	24 Vikrita	. .	3 Jyēshtha
3795	616	751	100		693 94	25 Khara	. .	

LXXVI—*Contd*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 LANDS)			
Day and month, A D	Week day	Time of mean Mesha samkrānti	Day and month, A D	Week day	a (here $=t$, the index of the tithi)	
13	14	17	19	20	23	1
		H　M　S				
22 Mar (81)	5 Thur	5　25　0	9 Mar (68)	6 Fri	320 7213	3771
22 Mar (81)	6 Fri	11　37　30	26 Feb (57)	3 Tues	196 4046	3772
22 Mar (81)	0 Sat	17　50　0	17 Mar (76)	2 Mon	231 0442	3773
22 Mar (82)	2 Mon	0　2　30	5 Mar (65)	6 Fri	106 7276	3774
22 Mar (81)	3 Tues	6　15　0	23 Feb (54)	4 Wed	321 0429	3775
22 Mar (81) .	4 Wed	12　27　30	13 Mar (72)	2 Mon	17 0506	3776
22 Mar (81) .	5 Thur	18　40　0	3 Mar (62)	0 Sat	231 3658	3777
22 Mar (82)	0 Sat	0　52　30	21 Mar (81)	6 Fri	266 0054	3778
22 Mar (81) .	1 Sun	7　5　0	10 Mar (69)	3 Tues	141 6888	3779
22 Mar (81) .	2 Mon	13　17　30	27 Feb (58)	0 Sat	17 3723	3780
22 Mar (81)	3 Tues	19　30　0	18 Mar (77)	6 Fri	52 0118	3781
22 Mar (82)	5 Thur	1　42　30	7 Mar (67)	4 Wed	266 3271	3782
22 Mar (81)	6 Fri	7　55　0	24 Feb (55)	1 Sun	142 0105	3783
22 Mar (81) .	0 Sat	14　7　30	15 Mar (74)	0 Sat	176 0501	3784
22 Mar (81)	1 Sun	20　20　0	4 Mar (63)	4 Wed	52 3334	3785
22 Mar (82)	3 Tues	2　32　30	22 Feb (53)	2 Mon	266 6487	3786
22 Mar (81)	4 Wed	8　45　0	12 Mar (71)	1 Sun	301 2884	3787
22 Mar (81) .	5 Thur	14　57　30	1 Mar (60)	5 Thur	176 9717	3788
22 Mar (81) .	6 Fri	21　10　0	20 Mar (79)	4 Wed	211 6114	3789
22 Mar. (82) .	1 Sun	3　22　30	8 Mar (68) .	1 Sun	87 2948	3790
22 Mar (81)	2 Mon	9　35　0	26 Feb (57)	6 Fri	301 6100	3791
22 Mar (81) .	3 Tues	15　47　30	16 Mar (75)	4 Wed	9997 6177†	3792
22 Mar (81) .	4 Wed .	22　0　0	6 Mar (65)	2 Mon	211 9330	3793
22 Mar (82)	6 Fri	4　12　30	23 Feb (54)	6 Fri	87 6104	3794
22 Mar (81)	0 Sat	10　25　0	13 Mar (72)	5 Thur .	122 2560	3795

† As a mean tithi Chaitra Sukla 1 was expunged. The civil day corresponding to it, *i e*, the first day of the mean luni solar year, was as given in cols 19, 20

Kal.	Saka						
1	2	3	4	5	6	7	8
3796	617	744	1 3				
3797	618	745	1				
3798	619	746	3				
3799	620	747	1				
3800	621	748	1				
3801	622	757	1				
3802	623	758					
3803	624	759					
3804	625	760					
3805	626	761	110				
3806	627	762	111				
3807	628	763	112				
3808	629	764	113				
3809	630	765	114				
3810	631	766	115				
3811	632	767	116	7 10	41		
3812	633	768	117	710 11	42		
3813	634	769	118	711 12	43		2
3814	635	770	119	*712 13	44		
3815	636	771	120	713 14	45		44
3816	637	772	121	714 15	46		
3817	638	773	122	715 16	47		
3818	639	774	123	*716 17	48 Asada		4
3819	640	775	124	717 18	49		
3820	641	776	125	718 19	50 Arala		

† By the " Indian Calendar " 7 Âśvina was intercalated but the case was a close one.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A D	Week-day.	a (here $= t$, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81)	1 Sun .	16 37 30	2 Mar. (61)	2 Mon. .	9997 9394†	3796
22 Mar (81) .	2 Mon	22 50 0	21 Mar (80)	1 Sun. .	32 5790	3797
22 Mar (82)	4 Wed.	5 2 30	10 Mar (70) .	6 Fri .	246 8943	3798
22 Mar (81)	5 Thur .	11 15 0	27 Feb (58)	3 Tues .	122 5777	3799
22 Mar (81)	6 Fri .	17 27 30	18 Mar (77) .	2 Mon. .	157 2173	3800
22 Mar (81)	0 Sat .	23 40 0	7 Mar (66)	6 Fri .	32 9006	3801
22 Mar (82)	2 Mon .	5 52 30	25 Feb (56)	4 Wed .	247 2159	3802
22 Mar (81)	3 Tues .	12 5 0	15 Mar. (74) .	3 Tues. .	281 8555	3803
22 Mar (81)	4 Wed. .	18 37 30	4 Mar (63)	0 Sat .	157 5389	3804
23 Mar (82) .	6 Fri	0 30 0	21 Feb (52)	4 Wed .	33 2223	3805
22 Mar (82)	0 Sat	6 42 30	11 Mar (71)	3 Tues .	67 8619	3806
22 Mar (81)	1 Sun	12 55 0	1 Mar. (60)	1 Sun.	282 1771	3807
22 Mar (81)	2 Mon	19 7 30	20 Mar (79)	0 Sat. .	316 8168	3808
23 Mar. (82) .	4 Wed	1 20 0	9 Mar. (68) .	4 Wed. .	192 5002	3809
22 Mar (82) .	5 Thur	7 32 30	26 Feb (57) .	1 Sun. .	68 1835	3810
22 Mar (81)	6 Fri	13 45 0	16 Mar (75)	0 Sat .	102 8231	3811
22 Mar (81)	0 Sat. .	19 57 30	6 Mar (65)] .	5 Thur .	317 1384	3812
23 Mar. (82) . .	2 Mon	2 10 0	23 Feb (54) .	2 Mon. .	192 8218	3813
22 Mar (82)	3 Tues	8 22 30	13 Mar (73) .	1 Sun .	227 4614	3814
22 Mar (81)	4 Wed. .	14 35 0	2 Mar (61) .	5 Thur .	103 1447	3815
22 Mar (81)	5 Thur	20 47 30	21 Mar. (80) .	4 Wed .	137 7843	3816
23 Mar (82) . .	0 Sat .	3 0 0	10 Mar (69)	1 Sun .	13 4678	3817
22 Mar (82) .	1 Sun. .	9 12 30	28 Feb (59)	6 Fri.	227 7831	3818
22 Mar (81) . .	2 Mon	15 25 0	18 Mar (77) .	5 Thur. .	262 4226	3819
22 Mar (81) . .	3 Tues .	21 37 30	7 Mar (66) .	2 Mon .	138 1060	3820

As a mean tithi Chaitra Śukla 1 was suppressed The civil day corresponding to it, *i.e*, the first day of the mean luni-solar year, was as given in cols. 19, 20

TABLE

			CONCURRENT YEAR					
Kalı	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	8	8a
3821	642	777	126		719 20	51 Pingala		4 Āshādha
3822	643	778	127		*720 21	52 Kālayukta		
3823	644	779	128		721 22	53 Siddhārthin		
3824	645	780	129		722 23	54 Raudra		1 Chaitra
3825	646	781	130		723 24	55 Durmati		
3826	647	782	131		*724 25	56 Dundubhi		9 Mārgaśira
3827	648	783	132		725-26	57 Rudhirōdgārin		
3828	649	784	133		726 27	58 Raktāksha		
3829	650	785	134		727-28	59 Krōdhana		6 Bhādrapada
3830	651	786	135		*728 29	60 Kshaya		
3831	652	787	136		729-30	1 Prabhava		
3832	653	788	137		730 31	2 Vibhava		2 Vaiśākha
3833	654	789	138		731 32	3 Śukla		
3834	655	790	139		*732 33	4 Pramōda		11 Māgha
3835	656	791	140		733 34	5 Prajāpati		
3836	657	792	141		734 35	6 Angiras†		
3837	658	793	142		735 36	8 Bhāva		7 Āśvina
3838	659	794	143		*736 37	9 Yuvan		
3839	660	795	144		737-38	10 Dhātṛ		
3840	661	796	145		738 39	11 Īśvara		4 Āshādha
3841	662	797	146		739 40	12 Bahudhānya		
3842	663	798	147		*740 41	13 Pramāthin		12 Phālguna
3843	664	799	148		741-42	14 Vikrama		
3844	665	800	149		742-43	15 Vrisha		
3845	666	801	150		743 44	16 Chitrabhānn		9 Mārgaśira

† By the mean system, as well as by the true system, 7 Śrīmukha was expunged.

LXX VI—*Contd*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year
Day and month, A D	Week day	Time of mean Mesha samkranti	Day and month, A D.	Week day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	5 Thur	3 50 0	24 Feb (55)	6 Fri	13 7894	3821
22 Mar (82)	6 Fri.	10 2 30	14 Mar (74)	5 Thur	48 4290	3822
22 Mar (81)	0 Sat	16 15 0	4 Mar (63)	3 Tues	262 7443	3823
22 Mar (81)	1 Sun	22 27 30	21 Feb (52)	0 Sat	138 4276	3824
23 Mar (82)	3 Tues	4 40 0	12 Mar (71)	6 Fri	173 0073	3825
22 Mar (82)	4 Wed.	10 52 30	29 Feb (60)	3 Tues	48 7506	3826
22 Mar (81)	5 Thur.	17 5 0	19 Mar (78)	2 Mon	83 3903	3827
22 Mar (81)	6 Fri	23 17 30	9 Mar (68)	0 Sat	297 7055	3828
23 Mar (82)	1 Sun	5 30 0	26 Feb (57)	4 Wed	173 3890	3829
22 Mar (82)	2 Mon	11 42 30	16 Mar (76)	3 Tues	208 0286	3830
22 Mar (81)	3 Tues	17 55 0	5 Mar (64)	0 Sat.	83 7119	3831
23 Mar (82)	5 Thur	0 7 30	23 Feb (54)	5 Thur	298 0272	3832
23 Mar (82)	6 Fri	6 20 0	14 Mar (73)	4 Wed.	332 6669	3833
22 Mar (82)	0 Sat	12 32 30	2 Mar (62)	1 Sun	208 3502	3834
22 Mar (81)	1 Sun	18 45 0	21 Mar (80)	0 Sat	242 9898	3835
23 Mar (82)	3 Tues	0 57 30	10 Mar (69)	4 Wed	118 6732	3836
23 Mar (82)	4 Wed	7 10 0	28 Feb (59)	2 Mon	332 9885	3837
22 Mar (82)	5 Thur	13 22 30	17 Mar (77)	0 Sat	28 9962	3838
22 Mar (81)	6 Fri	19 35 0	7 Mar (66)	5 Thur	243 3115	3839
23 Mar (82)	1 Sun	1 47 30	24 Feb (55)	2 Mon	118 9949	3840
23 Mar (82)	2 Mon	8 0 0	15 Mar (74)	1 Sun.	153 6345	3841
22 Mar (82)	3 Tues	14 12 30	3 Mar (63)	5 Thur	29 3179	3842
22 Mar (81)	4 Wed	20 25 0	22 Mar (81)	4 Wed	63 9575	3843
23 Mar (82)	6 Fri	2 37 30	12 Mar (71)	2 Mon	278 2728	3844
23 Mar (82)	0 Sat	8 50 0	1 Mar (60)	6 Fri	153 9561	3845

TABLE

				CONCURRENT YEAR.				
						JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
Kalı	Saka	Chaitrādi Vikrama	Meshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3846	667	802	151		*744 45	17 Subhānu		
3847	668	803	152		745 46	18 Tārana		...
3848	669	804	153		746 47	19 Pārthiva		5 Śrāvaṇa
3849	670	805	154		747 48	20 Vijaya		..
3850	671	806	155		*748 49	21 Sarvajit		...
3851	672	807	156		749 50	22 Sarvadhāriṇ		2 Vaiśākha
3852	673	808	157		750 51	23 Virōdhin		
3853	674	809	158		751-52	24 Vikrita		10 Pausha
3854	675	810	159		*752 53	25 Khara		...
3855	676	811	160		753 54	26 Nandana		
3856	677	812	161		754 55	27 Vijaya		7 Āśvina
3857	678	813	162		755 56	28 Jaya		..
3858	679	814	163		*756 57	29 Manmatha		..
3859	680	815	164		757 58	30 Durmukha		4 Āshāḍha
3860	681	816	165		758 59	31 Hēmalamba		..
3861	682	817	166		759 60	32 Vilamba		12 Phālguna
3862	683	818	167		*760 61	33 Vikārin		...
3863	684	819	168		761 62	34 Śārvarin		..
3864	685	820	169		762 63	35 Plava		9 Mārgaśira
3865	686	821	170		763 64	36 Śubhakrit		...
3866	687	822	171		*764 65	37 Śōbhana		...
3867	688	823	172		765 66	38 Krōdhin		5 Śrāvaṇa
3868	689	824	173		766 67	39 Viśvāvasu		..
3869	690	825	174		767-68	40 Parābhava		.
3870	691	826	175		*768 69	41 Plavaṅga		2 Vaiśākha

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COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year.
Day and month, A D	Week day.	Time of mean Mesha-samkrānti	Day and month, A D	Week-day	a (here $= t$, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
22 Mar (82)	1 Sun.	15 2 30	19 Mar (79)	5 Thur	188 5957	3846
22 Mar (81)	2 Mon	21 15 0	8 Mar (67)	2 Mon	64 2790	3847
23 Mar (82)	4 Wed	3 27 30	26 Feb (57)	0 Sat	278 5044	3848
23 Mar (82)	5 Thur.	9 40 0	17 Mar (76)	6 Fri	313 2341	3849
22 Mar (82)	6 Fri	15 52 30	5 Mar (65)	3 Tues	188 9173	3850
22 Mar. (81)	0 Sat	22 5 0	22 Feb (53)	0 Sat	64 6007	3851
23 Mar (82)	2 Mon.	4 17 30	13 Mar (72)	6 Fri	99 2404	3852
23 Mar. (82)	3 Tues	10 30 0	3 Mar (62)	4 Wed	313 5556	3853
22 Mar (82)	4 Wed.	16 42 30	20 Mar. (80)	2 Mon	9 5633	3854
22 Mar (81)	5 Thur	22 55 0	10 Mar (69)	0 Sat	223 8786	3855
23 Mar (82)	0 Sat	5 7 30	27 Feb (58)	4 Wed	99 5620	3856
23 Mar (82)	1 Sun	11 20 0	18 Mar (77)	3 Tues	134 2016	3857
22 Mar (82)	2 Mon	17 32 30	6 Mar (66)	0 Sat	9 8850	3858
22 Mar (81)	3 Tues	23 45 0	24 Feb (55)	5 Thur	224 2003	3859
23 Mar (82)	5 Thur	5 57 30	15 Mar (74)	4 Wed	258 8399	3860
23 Mar (82)	6 Fri.	12 10 0	4 Mar (63)	1 Sun	134 5233	3861
22 Mar (82)	0 Sat	18 22 30	22 Mar (82)	0 Sat	169 1628	3862
23 Mar (82)	2 Mon	0 35 0	11 Mar (70)	4 Wed	44 8463	3863
23 Mar (82)	3 Tues	6 47 30	1 Mar (60)	2 Mon	259 1616	3864
23 Mar (82)	4 Wed	13 0 0	20 Mar (79)	1 Sun.	293 8012	3865
22 Mar (82)	5 Thur	19 12 30	8 Mar (68)	5 Thur	169 4846	3866
23 Mar (82)	0 Sat	1 25 0	25 Feb (56)	2 Mon.	45 1680	3867
23 Mar (82)	1 Sun.	7 37 30	16 Mar (75)	Sun	79 8076	3868
23 Mar (82)	2 Mon	13 50 0	6 Mar (65)	6 Fri	294 1228	3869
22 Mar. (82)	3 Tues	20 2 30	23 Feb (54)	3 Tues	169 8062	3870

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
						JOVIAN SAMVATSARA		
Kali	Saka	Chaitrādi Vikrama	Meshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3871	692	827	176		769 70	42 Kilala		
3872	693	828	177		770 71	43 Saumya	.	10 Pausha .
3873	694	829	178		771-72	44 Sidhārana	.	
3874	695	830	179		*772-73	45 Virōdhakrit	.	
3875	696	831	180		773 74	46 Paridhāvin	.	7 Āsvina
3876	697	832	181		774 75	47 Pramādin		
3877	698	833	182		775 76	18 Ānanda		
3878	699	834	183		*776 77	49 Rākshasa		3 Jyēshtha
3879	700	835	184		777 78	50 Anala	.	.
3880	701	836	185		778 79	51 Pingala		12 Phālguna .
3881	702	837	186		779 80	52 Kālavukta		
3882	703	838	187		*780 81	53 Siddhārthin		
3883	704	839	188		781-82	54 Raudra		8 Kārttika
3884	705	840	189		782 83	55 Durmati	.	
3885	706	841	190		783 84	56 Dundubhi	.	
3886	707	842	191		*784-85	57 Rudhirōdgārin	.	5 Srāvana .
3887	708	843	192		785 86	58 Raktāksha	.	.
3888	709	844	193		786 87	59 Krōdhana	.	
3889	710	845	194		787 88	60 Kshaya	.	1 Chaitra
3890	711	846	195		*788 89	1 Prabhava	.	.
3891	712	847	196		789 90	2 Vibhava	.	10 Pausha .
3892	713	848	197		790 91	3 Sukla	. .	
3893	714	849	198		791-92	4 Pramōda .		
3894	715	850	199		*792 93	5 Prajāpati	.	7 Āsvina†
3895	716	851	200		793 94	6 Angiras .	.	

† By the "Indian Calendar" 6 Bhādrapada was intercalated.

LXXVI—*Contd*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kalı year.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and month, A.D	Week-day	Time of mean Mĕsha samkrānti	Day and month, A.D.	Week-day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	5 Thur	2 15 0	13 Mar (72) .	2 Mon	204 4459	3871
23 Mar (82) . .	6 Fri .	8 27 30	2 Mar (61) .	6 Fri .	80 1292	3872
23 Mar (82) . .	0 Sat	14 40 0	21 Mar. (80)	5 Thur. .	114 7688	3873
22 Mar (82)	1 Sun	20 52 30	10 Mar (70)	3 Tues	329 0841	3874
23 Mar (82) .	3 Tues	3 5 0	27 Feb (58)	0 Sat	204 7675	3875
23 Mar (82) .	4 Wed	9 17 30	18 Mar (77) .	6 Fri	239 4071	3876
23 Mar (82) . .	5 Thur.	15 30 0	7 Mar (66) .	3 Tues	115 0904	3877
22 Mar (82) .	6 Fri	21 42 30	25 Feb (56) .	1 Sun .	329 4057	3878
23 Mar (82) .	1 Sun .	3 55 0	14 Mar (73)	6 Fri .	25 4134	3879
23 Mar (82)	2 Mon .	10 7 30	4 Mar (63)	4 Wed. .	239 7288	3880
23 Mar. (82) .	3 Tues	16 20 0	23 Mar (82)	3 Tues	274 3682	3881
22 Mar (82)	4 Wed	22 32 30	11 Mar (71)	0 Sat	150 0517	3882
23 Mar (82) .	6 Fri	4 45 0	28 Feb (59) .	4 Wed	25 7351	3883
23 Mar (82) . .	0 Sat	10 57 30	19 Mar (78) .	3 Tues	60 3747	3884
23 Mar (82)	1 Sun	17 10 0	9 Mar (68) .	1 Sun	274 6900	3885
22 Mar (82)	2 Mon	23 22 30	26 Feb (57) • .	5 Thur	150 3734	3886
23 Mar. (82)	4 Wed	5 35 0	16 Mar (75)	4 Wed .	185 0130	3887
23 Mar (82) .	5 Thur	11 47 30	5 Mar (64)	1 Sun	60 6963	3888
23 Mar. (82)	6 Fri	18 0 0	23 Feb (54) .	6 Fri	275 0116	3889
23 Mar (83)	1 Sun.	0 12 30	13 Mar (73)	5 Thur	309 6513	3890
23 Mar (82)	2 Mon	6 25 0	2 Mar (61) .	2 Mon	185 3346	3891
23 Mar (82) .	3 Tues	12 37 30	21 Mar (80)	1 Sun	219 9743	3892
23 Mar (82) .	4 Wed .	18 50 0	10 Mar (69)	5 Thur	95 6576	3893
23 Mar (83) .	6 Fri	1 2 30	28 Feb (59)	3 Tues	309 9730	3894
23 Mar (82)	0 Sat .	7 15 0	17 Mar (76)	1 Sun	5 9807	3895

G

						CONCURRENT YEAR			
							Jovian Samvatsara		Mean Intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D		Southern system	Northern system	
1	2	3	3a	4	5		6	7	8a
3896	717	852	201		794 95		7 Srimukha	•	
3897	718	853	202		795 96		8 Bhāva	•	3 Jyēshtha
3898	719	854	203		*796 97		9 Yuvan	•	
3899	720	855	204		797 98		10 Dhātṛi	•	12 Phālguna
3900	721	856	205		798 99		11 Īśvara		
3901	722	857	206		799 800		12 Bahudhānya		
3902	723	858	207		*800 01		13 Pramāthin	•	8 Kārttika •
3903	724	859	208		801 02		14 Vikrama	•	
3904	725	860	209		802 03		15 Vrisha •	•	
3905	726	861	210		803 04		16 Chitrabhānu		5 Srāvana
3906	727	862	211		*804 05		17 Subhānu		
3907	728	863	212		805 06		18 Tāraṇa	•	
3908	729	864	213		806 07		19 Pārthiva •	•	1 Chaitra
3909	730	865	214		807 08		20 Vyaya •	•	•
3910	731	866	215		*808 09		21 Sarvajit	•	10 Pausha •
3911	732	867	216		809 10		22 Sarvadhārin	•	
3912	733	868	217		810 11		23 Virōdhin	•	•
3913	734	869	218		811-12		24 Vikrita •	•	6 Bhādrapada
3914	735	870	219		*812-13		25 Khara •	•	
3915	736	871	220		813-14		26 Nandana •	•	
3916	737	872	221		814-15		27 Vijaya • •	•	3 Jyēshtha •
3917	738	873	222		815-16		28 Jaya		...
3918	739	874	223		*816-17		29 Manmatha •	•	11 Māgha •
3919	740	875	224		817-18		30 Durmukha	•	•
3920	741	876	225		818-19		31 Hēmalamba •	•	...

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kalı year.
Day and month, A.D	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A.D	Week-day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	1 Sun	13 27 30	7 Mar (66)	6 Fri	220 2959	3896
23 Mar (82)	2 Mon	19 40 0	24 Feb (55)	3 Tues	95 9793	3897
23 Mar (83)	4 Wed	1 52 30	14 Mar (74)	2 Mon	130 6189	3898
23 Mar (82) .	5 Thur	8 5 0	3 Mar (62)	6 Fri	6 3023	3899
23 Mar (82)	6 Fri	14 17 30	22 Mar (81)	5 Thur	40 9419	3900
23 Mar (82) .	0 Sat	20 30 0	12 Mar (71)	3 Tues	255 2572	3901
23 Mar (83) .	2 Mon	2 42 30	29 Feb (60)	0 Sat	130 9406	3902
23 Mar (82) .	3 Tues	8 55 0	19 Mar (78)	6 Fri	165·5802	3903
23 Mar (82)	4 Wed	15 7 30	8 Mar (67)	3 Tues	41 2636	3904
23 Mar. (82) .	5 Thur.	21 20 0	26 Feb (57)	1 Sun	255 5789	3905
23 Mar (83)	0 Sat	3 32 30	16 Mar (76)	0 Sat	290 2185	3906
23 Mar (82) .	1 Sun	9 45 0	5 Mar (64)	4 Wed	165 9018	3907
23 Mar (82)	2 Mon	15 57 30	22 Feb (53)	1 Sun	41 5852	3908
23 Mar (82)	3 Tues	22 10 0	13 Mar (72)	0 Sat	76 2248	3909
23 Mar (83) .	5 Thur	4 22 30	2 Mar (62)	5 Thur	290 5401	3910
23 Mar (82)	6 Fri	10 35 0	21 Mar (80)	4 Wed	325 1798	3911
23 Mar (82) .	0 Sat	16 47 30	10 Mar (69)	1 Sun	200·8631	3912
23 Mar (82) .	1 Sun	23 0 0	27 Feb (58)	5 Thur	76 5465	3913
23 Mar (83)	3 Tues	5 12 30	17 Mar (77)	4 Wed.	111 1862	3914
23 Mar (82) .	4 Wed	11 25 0	7 Mar (66)	2 Mon	325·5013	3915
23 Mar. (82)	5 Thur	17 37 30	24 Feb (55)	6 Fri	201 1847	3916
23 Mar (82) .	6 Fri	23 50 0	15 Mar (74)	5 Thur	235 8244	3917
23 Mar (83) .	1 Sun	6 2 30	3 Mar (63)	2 Mon	111 5078	3918
23 Mar (82) .	2 Mon	12 15 0	22 Mar. (81)	1 Sun.	146 1473	3919
23 Mar (82)	3 Tues	18 27 30	11 Mar (70)	5 Thur.	21 8307	3920

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
						JOVIAN SAMVATSARA.		
Kali	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	3	3z	4	5	6	7	8a
3921	742	877	226		819 20	32 Vilamba† .	.	8 Kārttika .
3922	743	878	227		*820 21	34 Sarvarin	.	..
3923	744	879	228		821-22	35 Plava	.	
3924	745	880	229		822 23	36 Śubhakṛit .	.	4 Āshādha .
3925	746	881	230		823 24	37 Śobhana .	.	..
3926	747	882	231		*824-25	38 Krōdhin .	.	
3927	748	883	232	0 1	825-26	39 Viśvāvasu .	.	1 Chaitra .
3928	749	884	233	1-2	826-27	40 Parābhava .	.	.
3929	750	885	234	2-3	827-28	41 Plavanga .	.	10 Pausha
3930	751	886	235	3 4	*828 29	42 Kilaka .	.	.
3931	752	887	236	4 5	829 30	43 Saumya .	.	...
3932	753	888	237	5 6	830 31	44 Sādhārana .	.	6 Bhādrapada
3933	754	889	238	6 7	831-32	45 Virōdhakṛit .	.	...
3934	755	890	239	7-8	*832-33	46 Paridhāvin .	.	...
3935	756	891	240	8 9	833 34	47 Pramādin .	.	3 Jyēshtha .
3936	757	892	241	9 10	834 35	48 Ānanda .	.	..
3937	758	893	242	10 11	ʹ835 36	49 Rākshasa .	.	11 Māgha .
3938	759	894	243	11 12	*836 37	50 Anala .	.	...
3939	760	895	244	12-13	837-38	51 Piṅgala .	.	...
3940	761	896	245	13 14	838 39	52 Kālayukta .	.	8 Kārttika .
3941	762	897	246	14 15	839 40	53 Siddhārthin .	.	...
3942	763	898	247	15 16	*840-41	5, Raudra .	.	...
3943	764	899	248	16 17	841 42	55 Durmati .	.	4 Āshādha .
3944	765	900	249	17 18	842 43	56 Dundubhi .	.	...
3945	766	901	250	18-19	843-44	57 Rudhirōdgārin .	.	...

† By both mean and true systems 33 Vikārin was expunged

LXXVI—*Contd*

COMMENCEMENT OF THE						Kali year
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and Month, A.D	Week-day.	Time of mean Mêsha-samkrânti.	Day and month, A. D	Week-day	α (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
24 Mar (83) . .	5 Thur .	0 40 0	1 Mar (60) .	3 Tues. .	236 1460	3921
23 Mar (83) . .	6 Fri. .	6 52 30	19 Mar (79)	2 Mon. .	270 7856	3922
23 Mar (82) . .	0 Sat. .	13 5 0	8 Mar (67) .	6 Fri. .	146 4690	3923
23 Mar (82) . .	1 Sun. .	19 17 30	25 Feb (56) .	3 Tues. .	22 1524	3924
24 Mar (83) . .	3 Tues. .	1 30 0	16 Mar (75) .	2 Mon	56 7920	3925
23 Mar (83) . .	4 Wed. .	7 42 30	5 Mar (65) .	0 Sat. .	271 1073	3926
22 Mar (82) . .	5 Thur .	13 55 0	22 Feb (53) .	4 Wed. .	146 7906	3927
23 Mar (82) . .	6 Fri. .	20 7 30	13 Mar (72) .	3 Tues. .	181 4303	3928
24 Mar (83) . .	1 Sun .	2 20 0	2 Mar (61) .	0 Sat. .	57 1137	3929
23 Mar (83) . .	2 Mon. .	8 32 30	20 Mar (80) .	6 Fri. .	91 7533	3930
23 Mar (82)	3 Tues. .	14 45 0	10 Mar (69) .	4 Wed. .	306 0686	3931
23 Mar (82) . .	4 Wed. .	20 57 30	27 Feb (58) .	1 Sun	181 7519	3932
24 Mar (83) . .	6 Fri .	3 10 0	18 Mar (77) .	0 Sat. .	216 3916	3933
23 Mar (83) . .	0 Sat. .	9 22 30	6 Mar (66) .	4 Wed. .	92 0749	3934
23 Mar (82) . .	1 Sun. .	15 35 0	24 Feb (55) .	2 Mon	306 3902	3935
23 Mar (82) . .	2 Mon. .	21 47 30	14 Mar (73) .	0 Sat. .	2 3979	3936
24 Mar (83) . .	4 Wed. .	4 0 0	4 Mar (63) .	5 Thur .	216 7132	3937
23 Mar (83) . .	5 Thur .	10 12 30	22 Mar (82) .	4 Wed. .	251 3528	3938
23 Mar (82) . .	6 Fri. .	16 25 0	11 Mar (70) .	1 Sun. .	127 0362	3939
23 Mar (82) . .	0 Sat .	22 37 30	28 Feb (59) .	5 Thur .	2 7176	3940
24 Mar (83) . .	2 Mon .	4 50 0	19 Mar (78) .	4 Wed. .	37 3592	3941
23 Mar (83) . .	3 Tues .	11 2 30	8 Mar (68) .	2 Mon. .	251 6745	3942
23 Mar (82) . .	4 Wed. .	17 15 0	25 Feb (56) .	6 Fri	127 3579	3943
23 Mar (82) . .	5 Thur. .	23 17 30	16 Mar (75) .	5 Thur .	161 9975	3944
24 Mar (83) . .	0 Sat. .	5 40 0	5 Mar (64) .	2 Mon. .	37 6809	3945

CONCURRENT YEAR						JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month.
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3946	767	902	251	19-20	*844 45	58 Raktāksha		1 Chaitra
3947	768	903	252	20-21	845 46	59 Krōdhana		
3948	769	904	253	21 22	846 47	60 Kshaya .		9 Mārgaśira
3949	770	905	254	22 23	847-48	1 Prabhava		
3950	771	906	255	23-24	-*848 49	2 Vibhava		
3951	772	907	256	24 25	849 50	3 Śukla .		6 Bhādrapada.
3952	773	908	257	25 26	850-51	4 Pramōda .		
3953	774	909	258	26 27	851-52	5 Prajāpati .		
3954	775	910	259	27-28	*852 53	6 Angiras .		2 Vaiśākha
3955	776	911	260	28 29	853 54	7 Śrīmukha .		
3956	777	912	261	29 30	854 55	8 Bhāva		11 Māgha .
3957	778	913	262	30 31	855 56	9 Yuvan		
3958	779	914	263	31-32	*856 57	10 Dhātṛi		.
3959	780	915	264	32 33	857 58	11 Īśvara .	.	7 Āśvin
3960	781	916	265	33-34	858 59	12 Bahudhānya		
3961	782	917	266	34-35	859 60	13 Pramāthin	.	
3962	783	918	267	35 36	*860 61	14 Vikrama		4 Āshādha .
3963	784	919	268	36 37	861 62	15 Vṛisha	.	
3964	785	920	269	37-38	862 63	16 Chitrabhānu		12 Phālguna .
3965	786	921	270	38-39	863-64	17 Subhānu .	.	.
3966	787	922	271	39 40	*864-65	18 Tārana .	.	.
3967	788	923	272	40 41	865 66	19 Pārthiva	.	.
3968	789	924	273	41-42	866-67	20 Vyaya .	.	9 Mārgaśira
3969	790	925	274	42-43	867-68	21 Sarvajit .	.	.
3970	791	926	275	43 44	*868 69	22 Sarvadhārin .		6 Bhādrapada.†

† By the " Indian Calendar " 5 Śrāvana was intercalated.

LXXVI—*Contd*

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and month, A.D.	Week-day.	Time of mean Mēsha sambrānti	Day and month, A D	Week day.	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
23 Mar (83) .	1 Sun. .	11 52 30	23 Feb (54)	0 Sat	251 9960	3946
23 Mar (82) . .	2 Mon .	18 5 0	13 Mar (72)	6 Fri	286 6357	3947
24 Mar. (83) .	4 Wed .	0 17 30	2 Mar (61)	3 Tues .	102 3191	3948
24 Mar (83) . .	5 Thur .	6 30 0	21 Mar (80)	2 Mon	196 9588	3949
23 Mar (83) .	6 Fri .	12 42 30	9 Mar (69) .	6 Fri .	72 6421	3950
23 Mar (82) .	0 Sat. .	18 55 0	27 Feb (58) .	4 Wed	286 9573	3951
24 Mar (83) . .	2 Mon .	1 7 30	18 Mar. (77) .	3 Tues .	321 5970	3952
24 Mar (83) . .	3 Tues. .	7 20 0	7 Mar. (66) .	0 Sat .	107 2503	3953
23 Mar (83) .	4 Wed .	13 32 30	24 Feb (55) - .	4 Wed .	72 9637	3954
23 Mar (82) . .	5 Thur .	19 45 0	14 Mar (73) .	3 Tues .	107 6033	3955
24 Mar (83) .	0 Sat .	1 57 30	4 Mar (63)	1 Sun	321 9186	3956
24 Mar (83) . .	1 Sun	8 10 0	22 Mar (81) .	6 Fri .	17 9263	3957
23 Mar (83) . .	2 Mon .	14 22 30	11 Mar (71) .	4 Wed .	232 2416	3958
23 Mar (82) . .	3 Tues .	20 25 0	28 Feb (59) .	1 Sun .	107 9250	3959
24 Mar (83)	5 Thur .	2 47 30	19 Mar (78) .	0 Sat .	142 5646	3960
24 Mar (83) . .	6 Fri .	9 0 0	8 Mar (67) .	4 Wed .	18 2480	3961
23 Mar (83) . .	0 Sat .	15 12 30	26 Feb. (57) .	2 Mon .	232 5633	3962
23 Mar (82) . .	1 Sun .	21 25 0	16 Mar (75) .	1 Sun. .	267·2029	3963
24 Mar (83) .	3 Tues .	3 37 30	5 Mar (64) .	5 Thur .	142 8863	3964
24 Mar (83) . .	4 Wed. .	9 50 0	24 Mar. (83) .	4 Wed. .	177 5259	3965
23 Mar (83) .	5 Thur. .	16 2 30	12 Mar (72) .	1 Sun. .	53·2093	3966
23 Mar (82) . .	6 Fri .	22 15 0	2 Mar. (61) .	6 Fri. .	267·5245	3967
24 Mar (83) . .	1 Sun .	4 27 30	21 Mar (80) .	5 Thur. .	302·1642	3968
24 Mar (83) . .	2 Mon .	10 40 0	10 Mar (69) .	2 Mon. .	177·8476	3969
23 Mar. (83) . .	3 Tues. .	16 52 30	27 Feb (58) .	6 Fri. .	53 5309	3970

CONCURRENT YEAR.						JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
Kali.	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3971	792	927	276	44 45	869-70	23 Virōdhin　.　.　.		..
3972	793	928	277	45 46	870 71	24 Vikrita　.　.　.		
3973	794	929	278	46 47	871-72	25 Khara　.　.　.		2 Vaiśākha
3974	795	930	279	47-48	*872-73	26 Nandana　.　.		..
3975	796	931	280	48 49	873-74	27 Vijaya　.　.		11 Māgha
3976	797	932	281	49 50	874-75	28 Jaya　.		.
3977	798	933	282	50 51	875-76	29 Manmatha　.		
3978	799	934	283	51 52	*876-77	30 Durmukha　.		7 Āśvina
3979	800	935	284	52 53	877-78	31 Hēmalamba		
3980	801	936	285	53 54	878 79	32 Vilamba　.		.
3981	802	937	286	54 55	879 80	33 Vikārin　.　.		4 Āshādha
3982	803	938	287	55 56	*880 81	34 Śārvarin　.　.		.
3983	804	939	288	56 57	881-82	35 Plava　.　.		12 Phālguna　.
3984	805	940	289	57 58	882 83	36 Śubhakrit　.　.		
3985	806	941	290	58 59	883 84	37 Śōbhana　.　.		.
3986	807	942	291	59 60	*884-85	38 Krōdhin　.　.		9 Mārgaśira　.
3987	808	943	292	60 61	885 86	39 Viśvāvasu　.　.		.
3988	809	944	293	61-62	886 87	40 Parābhava　.　.		
3989	810	945	294	62 63	887 88	41 Plavanga　.　.		5 Śrāvana　.
3990	811	946	295	63 64	*888 89	42 Kīlaka　.　.		
3991	812	947	296	64 65	889 90	43 Saumya　.　.		
3992	813	948	297	65 66	890 91	44 Sādhārana　.　.		2 Vaiśākha
3993	814	949	298	66 67	891-92	45 Virōdhakrit　.　.		
3994	815	950	299	67 68	*892 93	46 Paridhāvin　.　.		10 Pausha　.
3995	816	951	300	68 69	893 94	47 Pramādin　.　.		...

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.]
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			
Day and month, A D	Week day	Time of mean Mēsha samkrānti	Day and month, A D	Week day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	4 Wed	23 5 0	17 Mar (76)	5 Thur.	88 1705	3971
24 Mar (83)	6 Fri	5 17 30	7 Mar (66)	3 Tues	302 4858	3972
24 Mar (83)	0 Sat	11 30 0	24 Feb (55)	0 Sat	178 1692	3973
23 Mar (83)	1 Sun	17 42 30	14 Mar (74)	6 Fri	212 8088	3974
23 Mar (82)	2 Mon	23 55 0	3 Mar (62)	3 Tues	88 4922	3975
24 Mar (83)	4 Wed	6 7 30	22 Mar (81)	2 Mon	123 1318	3976
24 Mar (83)	5 Thur	12 20 0	11 Mar (70)	6 Fri	9998 8151†	3977
23 Mar (83)	6 Fri	18 32 30	29 Feb (60)	4 Wed	213 1304	3978
24 Mar (83)	1 Sun	0 45 0	19 Mar (78)	3 Tues	247 7700	3979
24 Mar (83)	2 Mon	6 57 30	8 Mar (67)	0 Sat	123 4535	3980
24 Mar. (83)	3 Tues	13 10 0	25 Feb (56)	4 Wed	9999 1368†	3981
23 Mar (83)	4 Wed	19 22 30	15 Mar (75)	3 Tues	33 7764	3982
24 Mar (83)	6 Fri	1 35 0	5 Mar (64)	1 Sun.	248 0917	3983
24 Mar (83)	0 Sat	7 47 30	24 Mar (83)	0 Sat	282 7313	3984
24 Mar (83)	1 Sun	14 0 0	13 Mar (72)	4 Wed.	158 4147	3985
23 Mar (83)	2 Mon	20 12 30	1 Mar (61)	1 Sun	34 0980	3986
24 Mar (83)	4 Wed	2 25 0	20 Mar (79)	0 Sat	68 7377	3987
24 Mar (83)	5 Thur	8 37 30	10 Mar (69)	5 Thur	283 0530	3988
24 Mar (83)	6 Fri	14 50 0	27 Feb (58)	2 Mon	158 7364	3989
23 Mar (83)	0 Sat	21 2 30	17 Mar (77)	1 Sun	193 3760	3990
24 Mar (83)	2 Mon	3 15 0	6 Mar (65)	5 Thur	69 0594	3991
24 Mar (83)	3 Tues	9 27 30	24 Feb (55)	3 Tues	283 3746	3992
24 Mar (83)	4 Wed	15 40 0	15 Mar (74)	2 Mon.	318 0143	3993
23 Mar. (83)	5 Thur	21 52 30	3 Mar (63)	6 Fri	193 6976	3994
24 Mar (83)	0 Sat	4 5 0	22 Mar (81)	5 Thur	228 3372	3995

† As a mean tithi Chaitra śukla 1 was suppressed   The civil day corresponding to it, i e, the first day of
the mean luni solar year, was as given in cols 19, 20

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TABLE

CONCURRENT YEAR.								Mean Intercalated (adhika) lunar month
Kau.	Saka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A.D	Jovian samvatsara		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3996	817	952	301	69 70	894 95	48 Ānanda		
3997	818	953	302	70 71	895 96	49 Rākshasa		7 Āśvina
3998	819	954	303	71 72	*896 97	50 Anala		
3999	820	955	304	72 73	897 98	51 Pingala		
4000	821	956	305	73-74	898 99	52 Kālayukta		3 Jyēshṭha
4001	822	957	306	74 75	899 900	53 Siddhārthin		
4002	823	958	307	75 76	*900 01	54 Raudra		12 Phālguna
4003	824	959	308	76 77	901 02	55 Durmati		
4004	825	960	309	77-78	902 03	56 Dundubhi		
4005	826	961	310	78 79	903 04	57 Rudhirōdgārin		9 Mārgaśira §
4006	827	962	311	79 80	*904 05	58 Raktākshat†		
4007	828	963	312	80 81	905 06	59 Krōdhana	60 Kshaya	
4008	829	964	313	81 82	906 07	60 Kshaya‡	1 Prabhava	5 Śrāvana
4009	830	965	314	82 83	907-08	1 Prabhava	2 Vibhava	
4010	831	966	315	83-84	*908 09	2 Vibhava	3 Śukla	
4011	632	967	316	84 85	909 10	3 Śukla	4 Pramōda	2 Vaisākha
4012	633	968	317	85 86	910 11	4 Pramōda	5 Prajāpati	
4013	834	969	318	86-87	911 12	5 Prajāpati	6 Angiras	10 Pausha
4014	835	970	319	87-88	*912 13	6 Angiras	7 Śrīmukha	
4015	836	971	320	88 89	913 14	7 Śrīmukha	8 Bhāva	
4016	837	972	321	89 90	914 15	8 Bhāva	9 Yuvan	7 Āśvina
4017	838	973	322	90 91	915 16	9 Yuvan	10 Dhātṛ	
4018	839	974	323	91-92	*916 17	10 Dhātṛ	11 Īśvara	
4019	840	975	324	92 93	917-18	11 Īśvara	12 Bahudhānya	3 Jyēshṭha
4020	841	976	325	93 94	918 19	12 Bahudhānya	13 Pramāthin	

† By the mean system 59 Krōdhana was expunged, by the true system 60 Kshaya was the expunged samvatsara and the year A D 905 6 was called "Krodhana"
‡ By southern reckoning there was no suppression after this year
§ By the "Indian Calendar" 8 Kārttika was intercalated.

LXXVI—*contd*

1 Ārya Siddhānta, mean system

COMMENCEMENT OF THE						Kali year
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and month, A D	Week day	Time of mean Mēshasamkrānti	Day and month, A. D.	Week day	a (here $= t$, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
24 Mar (83)	1 Sun	10 17 30	11 Mar (70)	2 Mon	104 0206	3996
24 Mar (83)	2 Mon	16 30 0	1 Mar (60)	0 Sat	318 3359	3997
23 Mar (83)	3 Tues	22 42 30	18 Mar (78)	5 Thur	14 3436	3998
24 Mar (83)	5 Thur	4 55 0	8 Mar (67)	3 Tues	228 6589	3999
24 Mar (83)	6 Fri	11 7 30	25 Feb (56)	0 Sat	104 3423	4000
24 Mar (83)	0 Sat	17 20 0	16 Mar (75)	6 Fri	138 9819	4001
23 Mar (83)	1 Sun	23 32 30	4 Mar (64)	3 Tues	14 6653	4002
24 Mar (83)	3 Tues	5 45 0	23 Mar (82)	2 Mon	49 3049	4003
24 Mar (84)	4 Wed	11 57 30	13 Mar (72)	0 Sat	263 6202	4004
24 Mar (83)	5 Thur	18 10 0	2 Mar (61)	4 Wed	139 3034	4005
24 Mar (84)	0 Sat	0 22 30	20 Mar (80)	3 Tues	173 9431	4006
24 Mar (83)	1 Sun	6 35 0	9 Mar (68)	0 Sat	49 6264	4007
24 Mar (83)	2 Mon	12 47 30	27 Feb (58)	5 Thur	263 9418	4008
24 Mar (83)	3 Tues	19 0 0	18 Mar (77)	4 Wed	298 5814	4009
24 Mar (84)	5 Thur	1 12 30	6 Mar (66)	1 Sun	171 2647	4010
24 Mar (83)	6 Fri	7 25 0	23 Feb (54)	5 Thur	49 9481	4011
24 Mar (83)	0 Sat	13 37 30	14 Mar (73)	4 Wed	84 5878	4012
24 Mar (83)	1 Sun	19 50 0	4 Mar (63)	2 Mon	298 9030	4013
24 Mar (84)	3 Tues	2 2 30	21 Mar (81)	0 Sat	9994 9109†	4014
24 Mar (83)	4 Wed	8 15 0	11 Mar (70)	5 Thur	209 2259	4015
24 Mar (83)	5 Thur	14 27 30	28 Feb (59)	2 Mon	84 9093	4016
24 Mar (83)	6 Fri	20 40 0	19 Mar (78)	1 Sun	119 5490	4017
24 Mar (84)	1 Sun	2 52 30	7 Mar (67)	5 Thur	9995 2324†	4018
24 Mar (83)	2 Mon	9 5 0	25 Feb (56)	3 Tues	209 5476	4019
24 Mar (83)	3 Tues	15 17 30	16 Mar (75)	2 Mon	244 1872	4020

† As a mean tithi Chaitra Śukla 1 was suppressed   The civil day corresponding to it, i e., the first day of the luni solar year was as given in cols 19, 20

TABLE

						CONCURRENT YEAR		
							JOVIAN SAMVATSARA.	Mean Intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama	Māshādi solar year in Bengal.	Kollam	A.D	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4021	842	977	326	94 95	919 20	13 Pramāthin .	14 Vikrama .	12 Phālguna .
4022	843	978	327	95 96	*920 21	14 Vikrama	15 Vṛisha . .	. .
4023	844	979	328	96 97	921 22	15 Vṛisha .	16 Chitrabhānu .	. .
4024	845	980	329	97 98	922 23	16 Chitrabhānu .	17 Subhānu .	8 Kārttika .
4025	846	981	330	98 99	923 24	17 Subhānu .	18 Tāraṇa .	
4026	847	982	331	99 00	*924-25	18 Tāraṇa .	19 Pārthiva .	
4027	848	983	332	100 01	925-26	19 Pārthiva .	20 Vyaya .	5 Śrāvana
4028	849	984	333	101-02	926 27	20 Vyaya .	21 Sarvajit.	.
4029	850	985	334	102 03	927 28	21 Sarvajit	22 Sarvadhārin	.
4030	851	986	335	103 04	*928 29	22 Sarvadhārin .	23 Virōdhin .	1 Chaitra
4031	852	987	336	104 05	929 30	23 Virōdhin .	24 Vikṛita .	.
4032	853	988	337	105 06	930 31	24 Vikṛita .	25 Khara .	10 Pausha
4033	854	989	338	106 07	931-32	25 Khara .	26 Nandana .	
4034	855	990	339	107 08	*932 33	26 Nandana .	27 Vijaya .	.
4035	856	991	340	108-09	933 34	27 Vijaya .	28 Jaya . .	6 Bhādrapada
4036	857	992	341	109 10	934 35	28 Jaya .	29 Manmatha .	. .
4037	858	993	342	110-11	935 36	29 Manmatha .	30 Durmukha .	
4038	859	994	343	111-12	*936-37	30 Durmukha .	31 Hēmalamba .	3 Jyēshṭha .
4039	860	995	344	112-13	937-38	31 Hēmalamba .	32 Vilamba .	...
4040	861	996	345	113 14	938-39	32 Vilamba .	33 Vikārin .	11 Māgha .
4041	862	997	346	114-15	939-40	33 Vikārin .	34 Śārvarin .	...
4042	863	998	347	115-16	*940-41	34 Śārvarin .	35 Plava . .	...
4043	864	999	348	116-17	941-42	35 Plava .	36 Subhakṛit .	8 Kārttika .
4044	865	1000	349	117-18	942-43	36 Subhakṛit .	37 Sōbhana .	...
4045	866	1001	350	118-19	943 44	37 Sōbhana .	38 Krōdhin .	...

LXXVI—*contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
Mean solar year.			Mean luni-solar year (mean sunrise of civil day on which Chaitra Śukla 1 ends)			Kali year.
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A D.	Week-day.	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
24 Mar (83) .	4 Wed.	21 30 0	5 Mar (64)	6 Fri .	119 8706	4021
24 Mar (84)	6 Fri .	3 42 30	23 Mar (83) .	5 Thur .	154 5102	4022
24 Mar (83) . .	0 Sat .	9 55 0	12 Mar (71) .	2 Mon	30 1936	4023
24 Mar (83) .	1 Sun. .	16 7 30	2 Mar. (61) .	0 Sat .	244 5089	4024
24 Mar (83) .	2 Mon.	22 20 0	21 Mar (80) .	6 Fri. .	279 1485	4025
24 Mar (84) .	4 Wed	4 32 30	9 Mar (69) .	3 Tues .	154 8319	4026
24 Mar (83)	5 Thur.	10 45 0	26 Feb (57)	0 Sat .	30 5153	4027
24 Mar (83) . .	6 Fri .	16 57 30	17 Mar (76) .	6 Fri .	65·1549	4028
24 Mar (83)	0 Sat	23 10 0	7 Mar (66)·	4 Wed. .	279·4701	4029
24 Mar (84)	2 Mon	5 22 30	24 Feb (55) .	1 Sun .	155 1535	4030
24 Mar. (83)	3 Tues .	11 35 0	14 Mar (73) .	0 Sat .	189 7932	4031
24 Mar (83)	4 Wed	17 47 30	3 Mar (62) .	4 Wed	65 4765	4032
25 Mar (84) .	6 Fri	0 0 0	22 Mar (81) .	3 Tues .	100 1162	4033
24 Mar (84)	0 Sat .	6 12 30	11 Mar (71) .	1 Sun	314 4314	4034
24 Mar (83) .	1 Sun	12 25 0	28 Feb (59) .	5 Thur .	190 1148	4035
24 Mar (83) .	2 Mon .	18 37 30	19 Mar (78) .	4 Wed .	224 7544	4036
25 Mar (84) .	4 Wed. .	0 50 0	8 Mar (67) .	1 Sun .	100 4378	4037
24 Mar (84) .	5 Thur .	7 2 30	26 Feb (57) .	6 Fri .	314 7531	4038
24 Mar (83)	6 Fri .	13 15 0	15 Mar (74) .	4 Wed. .	10 7698	4039
24 Mar (83)	0 Sat	19 27 30	5 Mar (64) .	2 Mon .	225 0661	4040
25 Mar (84) . .	2 Mon.	1 40 0	24 Mar (83) .	1 Sun. .	259 7156	4041
24 Mar (84) . .	3 Tues.	7 52 30	12 Mar (72) .	5 Thur .	135 3991	4042
24 Mar (83) .	4 Wed.	14 5 0	1 Mar (60) .	2 Mon .	11 0825	4043
24 Mar (83) . .	5 Thur .	20 17 30	20 Mar (79) .	1 Sun. .	45 7222	4044
25 Mar. (84) . .	0 Sat.	2 30 0	10 Mar (69) .	6 Fri. .	260 0474	4045

TABLE

						JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4046	867	1002	351	119 20	*944 45	38 Krōdhin	39 Visvāvasu	5 Srāvana†
4047	868	1003	352	120 21	945 46	39 Visvāvasu	40 Parābhava	
4048	869	1004	353	121-22	946 47	40 Parābhava	41 Plavanga	
4049	870	1005	354	122 23	947-48	41 Plavanga	42 Kīlaka	1 Chaitra
4050	871	1006	355	123-24	*948 49	42 Kīlaka	43 Saumya	.
4051	872	1007	356	124 25	949 50	43 Saumya	44 Sādhārana	10 Pausha .
4052	873	1008	357	125 26	950 51	44 Sādhārana	45 Virōdhakrit	
4053	874	1009	358	126 27	951-52	45 Virōdhakrit	46 Paridhāvin	
4054	875	1010	359	127 28	*952 53	46 Paridhāvin	47 Pramādin	6 Bhādrapada
4055	876	1011	360	128 29	953 54	47 Pramādin	48 Ānanda	
4056	877	1012	361	129 30	954 55	48 Ānanda .	49 Rākshasa .	
4057	878	1013	362	130 31	955 56	49 Rākshasa	50 Anala	3 Jyēshtha
4058	879	1014	363	131 32	*956 57	50 Anala .	51 Pingala	.
4059	880	1015	364	132 33	957 58	51 Pingala	52 Kālayukta .	11 Māgha
4060	881	1016	365	133 34	958-59	52 Kālayukta	53 Siddhārthin	
4061	882	1017	366	134 35	959 60	53 Siddhārthin	54 Raudra	
4062	883	1018	367	135 36	*960 61	54 Raudra	55 Durmati .	8 Kārttika .
4063	884	1019	368	136 37	961 62	55 Durmati	56 Dundubhi	
4064	885	1020	369	137 38	962 63	56 Dundubhi .	57 Rudhirōdgārin	..
4065	886	1021	370	138 39	963 64	57 Rudhirōdgārin	58 Raktāksha	4 Āshādha
4066	887	1022	371	139 40	*964 65	58 Raktāksha	59 Krōdhana	.
4067	888	1023	372	140 41	965 66	59 Krōdhana	60 Kshaya .	
4068	889	1024	373	141 42	966 67	60 Kshaya .	1 Prabhava	1 Chaitra
4069	890	1025	374	142 43	967 68	1 Prabhava .	2 Vibhava	
4070	991	1026	375	143 44	*968 69	2 Vibhava	3 Śukla	9 Mārgasira

† By the " *Indian Calendar* " the intercalated month was 4 Āshādha

LXXVI—*contd*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year
Day and month, A D	Week day	Time of mean Mesha-samkrānti	Day and month, A D	Week day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
24 Mar (84) .	1 Sun	8 42 30	27 Feb (58)	3 Tues	135 7207	4046
24 Mar (83)	2 Mon	14 55 0	17 Mar (76)	2 Mon	170 3603	4047
24 Mar (83)	3 Tues	21 7 30	6 Mar (65)	6 Fri	46 0436	4048
25 Mar (84)	5 Thur	3 20 0	24 Feb (55)	4 Wed	260 3590	4049
24 Mar (84) .	6 Fri	9 32 30	14 Mar (74)	3 Tues	294 9986	4050
24 Mar (83)	0 Sat .	15 45 0	3 Mar (62)	0 Sat	170 6819	4051
24 Mar (83)	1 Sun	21 57 30	22 Mar (81) .	6 Fri	205 3216	4052
25 Mar (84)	3 Tues .	4 10 0	11 Mar (70)	3 Tues	81 0049	4053
24 Mar (84)	4 Wed	10 22 30	29 Feb (60)	1 Sun	295 3203	4054
24 Mar (83)	5 Thur	16 35 0	19 Mar (78)	0 Sat	329 9599	4055
24 Mar (83)	6 Fri	22 47 30	8 Mar (67)	4 Wed	205 6432	4056
25 Mar (84)	1 Sun	5 0 0	25 Feb (56)	1 Sun	81 3266	4057
24 Mar (84)	2 Mon	11 12 30	15 Mar (75)	0 Sat	115 9662	4058
24 Mar (83)	3 Tues	17 25 0	5 Mar (64)	5 Thur	330 2815	4059
24 Mar (83)	4 Wed	23 37 30	23 Mar (82)	3 Tues	26 2892	4060
25 Mar (84)	6 Fri	5 50 0	13 Mar (72)	1 Sun	240 6045	4061
24 Mar (84)	0 Sat	12 2 30	1 Mar (61)	5 Thur	116 2879	4062
24 Mar (83) .	1 Sun	18 15 0	20 Mar (79)	4 Wed	150 9275	4063
25 Mar (84)	3 Tues	0 27 30	9 Mar (68) .	1 Sun .	26 6109	4064
25 Mar (84) .	4 Wed	6 40 0	27 Feb (58)	6 Fri .	240 9262	4065
24 Mar (84)	5 Thur	12 52 30	17 Mar (77) .	5 Thur	275 5658	4066
24 Mar (83)	6 Fri	19 5 0	6 Mar (65)	2 Mon	151 2491	4067
25 Mar (84)	1 Sun.	1 17 30	23 Feb (54)	6 Fri	26 9325	4068
25 Mar (84) .	2 Mon	7 30 0	14 Mar (73)	5 Thur	61 5721	4069
24 Mar (84)	3 Tues	13 42 30	3 Mar (63)	3 Tues	275 8874	4070

TABLE

						JOVIAN SAMVATSARĀ			Mean Intercalated (adhika) lunar month.
					CONCURRENT YEAR				
Kali	Śaka.	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D		Southern system	Northern system	
1	2	3	3a	4	5		6	8	8a
4071	892	1027	376	144 45	969-70		3 Śukla	4 Pramōda	
4072	893	1028	377	145 46	970 71		4 Pramōda	5 Prajāpati	
4073	894	1029	378	146 47	971 72		5 Prajāpati	6 Angiras	6 Bhādrapada
4074	895	1030	379	147 48	*972 73		6 Angiras	7 Śrīmukha	
4075	896	1031	380	148 49	973 74		7 Śrīmukha	8 Bhāva	
4076	897	1032	381	149 50	974 75		8 Bhāva	9 Yuvan	2 Vaiśākha
4077	898	1033	382	150 51	975 76		9 Yuvan	10 Dhātri	
4078	899	1034	383	151 52	*976 77		10 Dhātri	11 Īśvara	11 Māgha
4079	900	1035	384	152 53	977-78		11 Isvara	12 Bahudhānya	
4080	901	1036	385	153 54	978 79		12 Bahudhānya	13 Pramāthin	
4081	902	1037	386	154 55	979 80		13 Pramāthin	14 Vikrama	8 Kārttika †
4082	903	1038	387	155 56	*980 81		14 Vikrama	15 Vrisha	
4083	904	1039	388	156 57	981 82		15 Vrisha	16 Chitrabhānu	
4084	905	1040	389	157 58	982 83		16 Chitrabhānu	17 Subhānu	4 Āshādha
4085	906	1041	390	158 59	983 84		17 Subhānu	18 Tārana	
4086	907	1042	391	159 60	*984 85		18 Tārana	19 Pārthiva	
4087	908	1043	392	160 61	985 86		19 Pārthiva	20 Vijaya	1 Chaitra
4088	909	1044	393	161 62	986 87		20 Vyaya	21 Sarvajit	
4089	910	1045	394	162 63	987 88		21 Sarvajit	22 Sarvadhārin	9 Mārgaśira
4090	911	1046	395	163 64	*988 89		22 Sarvadhārin	23 Virōdhin	
4091	912	1047	396	164 65	989 90		23 Virōdhin	24 Vikrita ‡	
4092	913	1048	397	165 66	990 91		24 Vikrita	26 *Nandana*	6 Bhādrapada
4093	914	1049	398	166 67	991 92		25 Khara	27 *Vijaya*	
4094	915	1050	399	167 68	*992 93		26 Nandana	28 *Jaya*	
4095	916	1051	400	168 69	993 94		27 Vijaya	29 *Manmatha*	2 Vaiśākha

† By the "*Indian Calendar*" 7 Āsvina was intercalated
‡ 25 Khara was expunged in the north by the mean system, but 26 Nandana by the true system. By the true system the year A.D 990 91 was, in the north, called "Khara"

LXXVI—*Contd*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).			
Day and month, A D	Week-day	Time of mean Mesha-samkrānti	Day and month, A D	Week day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
24 Mar (83)	4 Wed	19 55 0	22 Mar (81)	2 Mon	310 5271	4071
25 Mar (84)	6 Fri	2 7 30	11 Mar (70)	6 Fri	186 2104	4072
25 Mar (84)	0 Sat	8 20 0	28 Feb (59)	3 Tues	61 8939	4073
24 Mar (84)	1 Sun	14 32 30	18 Mar (78)	2 Mon	96 5335	4074
24 Mar (83)	2 Mon	20 45 0	8 Mar (67)	0 Sat	310 8487	4075
25 Mar (84)	4 Wed	2 57 30	25 Feb (56)	4 Wed	186 5321	4076
25 Mar (84)	5 Thur	9 10 0	16 Mar (75)	3 Tues	221 1716	4077
24 Mar (84)	6 Fri.	15 22 30	4 Mar (64)	0 Sat	96 8550	4078
24 Mar. (83)	0 Sat	21 35 0	23 Mar (82)	6 Fri	131 4946	4079
25 Mar (84)	2 Mon	3 47 30	12 Mar (71)	3 Tues	7 1781	4080
25 Mar (84)	3 Tues	10 0 0	2 Mar (61)	1 Sun	221 4933	4081
24 Mar (84)	4 Wed	16 12 30	20 Mar (80)	0 Sat	256 1329	4082
24 Mar (83)	5 Thur	22 25 0	9 Mar (68)	4 Wed	131 8163	4083
25 Mar (84)	0 Sat	4 37 30	26 Feb (57)	1 Sun	7 4998	4084
25 Mar (84)	1 Sun	10 50 0	17 Mar (76)	0 Sat	41 1393	4085
24 Mar (84)	2 Mon	17 2 30	6 Mar (66)	5 Thur	256 4546	4086
24 Mar (83)	3 Tues	23 15 0	23 Feb (54)	2 Mon	132 1379	4087
25 Mar (84)	5 Thur	5 27 30	14 Mar (73)	1 Sun	166 7776	4088
25 Mar (84)	6 Fri	11 40 0	3 Mar (62)	5 Thur	42 4610	4089
24 Mar (84)	0 Sat	17 52 30	21 Mar (81)	4 Wed	77 1006	4090
25 Mar (84)	2 Mon	0 5 0	11 Mar (70)	2 Mon	291 4158	4091
25 Mar (84)	3 Tues	6 17 30	28 Feb (59)	6 Fri	167 0092	4092
25 Mar (84)	4 Wed	12 30 0	19 Mar (78)	5 Thur	201 7389	4093
24 Mar (84)	5 Thur	18 42 30	7 Mar (67)	2 Mon	77 4222	4094
25 Mar (84)	0 Sat	0 55 0	25 Feb (56)	0 Sat	291 7375	4095

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month.
						JOVIAN SAMVATSARA.		
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam.	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4096	917	1052	401	169 70	994 95	28 Jaya	30 Durmukha	
4097	918	1053	402	170 71	995 96	29 Manmatha	31 Hēmalamba	11 Māgha
4098	919	1054	403	171 72	*996 97	30 Durmukha	32 Vilamba	
4099	920	1055	404	172 73	997 98	31 Hēmalamba	33 Vikārin	
4100	921	1056	405	173-74	998 99	32 Vilamba	34 Sārvarin	7 Āsvina
4101	922	1057	406	174-75	999 000	33 Vikārin	35 Plava	
4102	923	1058	407	175 76	*1000 01	34 Sārvarin	36 Subhakṛt	
4103	924	1059	408	176-77	1001-02	35 Plava	37 Sōbhana	4 Āshāḍha
4104	925	1060	409	177-78	1002 03	36 Subhakṛt	38 Krōdhin	
4105	926	1061	410	178 79	1003 04	37 Sōbhana	39 Viśvāvasu	12 Phālguna
4106	927	1062	411	179 80	*1004 05	38 Krōdhin	40 Parābhava	
4107	928	1063	412	180-81	1005 06	39 Viśvāvasu	41 Plavanga	
4108	929	1064	413	181-82	1006 07	40 Parābhava	42 Kīlaka	9 Mārgaśira
4109	930	1065	414	182-83	1007-08	41 Plavanga	43 Saumya	...
4110	931	1066	415	183 84	*1008 09	42 Kīlaka	44 Sādhāraṇa	..
4111	932	1067	416	184-85	1009-10	43 Saumya	45 Virōdhakṛt	5 Srāvaṇa
4112	933	1068	417	185-86	1010 11	44 Sādhārana	46 Paridhāvin	
4113	934	1069	418	186-87	1011-12	45 Virōdhakṛt	47 Pramādin	
4114	935	1070	419	187-88	*1012-13	46 Paridhāvin	48 Ānanda	2 Vaisākha
4115	936	1071	420	188-89	1013 14	47 Pramādin	49 Rākshasa	...
4116	937	1072	421	189 90	1014-15	48 Ānanda	50 Anala	10 Pausha
4117	938	1073	422	190 91	1015-16	49 Rākshasa	51 Pingala	
4118	939	1074	423	191 92	*1016-17	50 Anala	52 Kālayukta	..
4119	940	1075	424	192-93	1017-18	51 Pingala	53 Siddhārthin	7 Āsvina
4120	941	1076	425	193 94	1018-19	52 Kālayukta	54 Raudra	...

LXXVI—*Contd.*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year.
Day and month, A.D	Week-day	Time of mean Mésha-samkrānti	Day and month, A D	Week-day.	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H. M S				
25 Mar. (84)	1 Sun	7 7 30	18 Mar (75)	6 Fri	326·8771	4096
25 Mar (84)	2 Mon	13 20 0	8 Mar (64)	3 Tues	202·0605	4097
24 Mar (84)	3 Tues	19 32 30	23 Mar (83)	2 Mon.	238·7001	4098
25 Mar. (84)	5 Thur	1 45 0	12 Mar (71)	6 Fri.	112·3835	4099
25 Mar (84)	6 Fri	7 57 30	2 Mar (61)	4 Wed	326·6988	4100
25 Mar (84)	0 Sat	14 10 0	20 Mar (79)	2 Mon.	22·7065	4101
24 Mar (84)	1 Sun	20 22 30	9 Mar (69)	0 Sat.	237·0218	4102
25 Mar (84)	3 Tues.	2 35 0	26 Feb (57)	4 Wed	112·7052	4103
25 Mar (84)	4 Wed.	8 47 30	17 Mar (76)	3 Tues	147·3448	4104
25 Mar (84)	5 Thur	15 0 0	6 Mar (65)	0 Sat	23·0272	4105
24 Mar (84)	6 Fri	21 12 30	24 Mar (84)	6 Fri	57·6667	4106
25 Mar (84)	1 Sun	3 25 0	14 Mar (73)	4 Wed	271·9631	4107
25 Mar (84)	2 Mon	9 37 30	3 Mar (62)	1 Sun	147·6665	4108
25 Mar (84)	3 Tues	15 50 0	22 Mar (81)	0 Sat.	182·3061	4109
24 Mar (84)	4 Wed	22 2 30	10 Mar. (70)	4 Wed.	57·9894	4110
25 Mar (84)	6 Fri	4 15 0	28 Feb. (59)	2 Mon.	272·3047	4111
25 Mar (84)	0 Sat.	10 27 30	19 Mar. (78)	1 Sun.	306·9444	4112
25 Mar (84)	1 Sun.	16 40 0	8 Mar. (67)	5 Thur	182·6277	4113
24 Mar (84)	2 Mon	22 52 30	25 Feb. (56)	2 Mon.	58·3111	4114
25 Mar (84)	4 Wed	5 5 0	15 Mar (74)	1 Sun.	92·9507	4115
25 Mar (84)	5 Thur	11 17 30	5 Mar. (64)	6 Fri.	307·2659	4116
25 Mar (84)	6 Fri	17 30 0	23 Mar (82)	4 Wed.	3·2737	4117
24 Mar (84)	0 Sat.	23 42 30	12 Mar. (72)	2 Mon	217·5890	4118
25 Mar (84)	2 Mon	5 55 0	1 Mar. (60)	6 Fri.	93·2723	4119
25 Mar (84)	3 Tues	12 7 30	20 Mar. (79)	5 Thur.	127·9119	4120

TABLE

						CONCURRENT YEAR		Mean Intercalated (adhika) lunar month
							JOVIAN SAMVATSARA	
Kali	Saka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam.	A.D	Southern system	Northern system.	
1	2	3	3a	4	5	6	7	8a
4121	942	1077	426	194 95	1019 20	53 Siddhārthin	55 Durmati	
4122	943	1078	427	195.96	*1020 21	54 Raudra	56 Dundubhi	4 Āshādha ‡
4123	944	1079	428	196 97	1021-22	55 Durmati	57 Rudhirōdgārin	
4124	945	1080	429	197 98	1022 23	56 Dundubhi	58 Raktāksha	12 Phālguna
4125	946	1081	430	198 99	1023 24	57 Rudhirōdgārin	59 Krōdhana	
4126	947	1082	431	199 00	*1024-25	58 Raktāksha	60 Kshaya	
4127	948	1083	432	200 01	1025 26	59 Krōdhana	1 Prabhava	9 Mārgaśira
4128	949	1084	433	201-02	1026 27	60 Kshaya	2 Vibhava	
4129	950	1085	434	202-03	1027-28	1 Prabhava	3 Śukla	
4130	951	1086	435	203 04	*1028-29	2 Vibhava	4 Pramōda	5 Śrāvaṇa
4131	952	1087	436	204 05	1029-30	3 Śukla	5 Prajāpati	
4132	953	1088	437	205 06	1030 31	4 Pramōda	6 Angiras	
4133	954	1089	438	206 07	1031-32	5 Prajāpati	7 Śrīmukha	2 Vaisākha
4134	955	1090	439	207-08	*1032-33	6 Angiras	8 Bhāva	
4135	956	1091	440	208 09	1033 34	7 Śrīmukha	9 Yuvan	10 Pausha
4136	957	1092	441	209 10	1034-35	8 Bhāva	10 Dhātṛi	
4137	958	1093	442	210 11	1035-36	9 Yuvan	11 Īśvara	
4138	959	1094	443	211-12	*1036 37	10 Dhātṛi	12 Bahudhānya	7 Āśvina
4139	960	1095	444	212-13	1037-38	11 Īśvara	13 Pramāthin	
4140	961	1096	445	213 14	1038 39	12 Bahudhānya	14 Vikrama	
4141	962	1097	446	214-15	1039-40	13 Pramāthin	15 Vrisha	3 Jyēshtha
4142	963	1098	447	215-16	*1040 41	14 Vikrama	16 Chitrabhānu	
4143	964	1099	448	216 17	1041-42	15 Vrisha	17 Subhānu	12 Phālguna
4144	965	1100	449	217-18	1042 43	16 Chitrabhānu	18 Tārana	...
4145	966	1101	450	218 19	1043 44	17 Subhānu	19 Pārthiva	...

‡ By the "*Indian Calendar*" 3 Jyēshtha was intercalated.

LXXVI—*Contd.*

1 Ārya Sĭddhānta, mean system.

COMMENCEMENT OF THE						
Mean solar year.			Mean luni solar year (mean sunrise of civil day on which Chaitra Śukla 1 ends)			Kali year.
Day and month, A.D	Week-day	Time of mean Mésha-samkránti	Day and month, A D	Week-day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H. M S				
25 Mar (84)	4 Wed	18 20 0	9 Mar (68)	2 Mon.	3 5953	4121
25 Mar (85)	6 Fri	0 32 30	27 Feb (58)	0 Sat	217 8106	4122
25 Mar (84)	0 Sat	6 45 0	17 Mar (76)	6 Fri.	252 5502	4123
25 Mar. (84)	1 Sun.	12 57 30	6 Mar (65)	3 Tues	128 2336	4124
25 Mar. (84)	2 Mon	19 10 0	25 Mar (84)	2 Mon	162 8732	4125
25 Mar (85)	4 Wed	1 22 30	13 Mar (73)	6 Fri	38 5566	4126
25 Mar (84)	5 Thur.	7 35 0	3 Mar (62)	4 Wed	252 8719	4127
25 Mar (84)	6 Fri.	13 47 30	22 Mar (81)	3 Tues	287 5115	4128
25 Mar (84)	0 Sat	20 0 0	11 Mar (70)	0 Sat	163 1948	4129
25 Mar (85)	2 Mon	2 12 30	28 Feb (59)	4 Wed	38 8782	4130
25 Mar (84)	3 Tues	8 25 0	18 Mar (77)	3 Tues	73 5179	4131
25 Mar. (84)	4 Wed	14 37 30	8 Mar (67)	1 Sun.	287 8331	4132
25 Mar (84)	5 Thur.	20 50 0	25 Feb (56)	5 Thur.	163 5165	4133
25 Mar (85)	0 Sat	3 2 30	15 Mar (75)	4 Wed	198 1561	4134
25 Mar (84)	1 Sun	9 15 0	4 Mar (63)	1 Sun	73 8395	4135
25 Mar (84)	2 Mon.	15 27 30	23 Mar (82)	0 Sat	108 4791	4136
25 Mar (84)	3 Tues	21 40 0	13 Mar (72)	5 Thur	322 7944	4137
25 Mar (85)	5 Thur.	3 52 30	1 Mar (61)	2 Mon	198 4778	4138
25 Mar (84)	6 Fri.	10 5 0	20 Mar (79)	1 Sun.	233 1174	4139
25 Mar (84)	0 Sat	16 17 30	9 Mar (68)	5 Thur	108 8008	4140
25 Mar (84)	1 Sun	22 30 0	27 Feb (58)	3 Tues	323 1161	4141
25 Mar (85)	3 Tues.	4 42 30	16 Mar (76)	1 Sun.	19 1238	4142
25 Mar (84)	4 Wed	10 55 0	6 Mar (65)	6 Fri	233 4391	4143
25 Mar (84)	5 Thur	17 7 30	25 Mar (84)	5 Thur	268 0787	4144
25 Mar (84)	6 Fri.	23 20 0	14 Mar (73)	2 Mon.	143 7021	4145

						JOVIAN SAMVATSARA.		Mean Intercalated (adhika) lunar month.
CONCURRENT YEAR.								
Kali.	Saka	Chaitrādi Vikrama	Māshādi solar year in Bengal.	Kollam	A.D	Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
4146	967	1102	451	219 20	*1044-45	18 Tāraṇa .	20 Vyaya .	8 Kārttika .
4147	968	1103	452	220 21	1045-46	19 Pārthiva .	21 Sarvajit .	.
4148	969	1104	453	221-22	1046-47	20 Vyaya .	22 Sarvadhārin .	...
4149	970	1105	454	222-23	1047-48	21 Sarvajit .	23 Virōdhin .	5 Srāvaṇa .
4150	971	1106	455	223-24	*1048-49	22 Sarvadhārin .	24 Vikṛta .	...
4151	972	1107	456	224 25	1049-50	23 Virōdhin .	25 Khara .	
4152	973	1108	457	225-26	1050 51	24 Vikṛta .	26 Nandana .	1 Chaitra .
4153	974	1109	458	226 27	1051 52	25 Khara .	27 Vijaya .	...
4154	975	1110	459	227-28	*1052 53	26 Nandana	28 Jaya .	10 Pausha .
4155	976	1111	460	228-29	1053-54	27 Vijaya .	29 Manmatha .	...
4156	977	1112	461	229-30	1054 55	28 Jaya	30 Durmukha .	...
4157	978	1113	462	230 31	1055-56	29 Manmatha .	31 Hēmalamba .	7 Āsvina†
4158	979	1114	463	231-32	*1056-57	30 Durmukha .	32 Vilamba .	...
4159	980	1115	464	232 33	1057 58	31 Hēmalamba	33 Vikārin .	...
4160	981	1116	465	233 34	1058-59	32 Vilamba	34 Sārvarin .	3 Jyēshṭha .
4161	982	1117	466	234 35	1059 60	33 Vikārin .	35 Plava .	...
4162	983	1118	467	235-36	*1060-61	34 Sārvarin .	36 Subhakṛit .	12 Phālguna .
4163	984	1119	468	236-37	1061-62	35 Plava .	37 Sōbhana .	...
4164	985	1120	469	237-38	1062-63	36 Subhakṛit .	38 Krōdhin .	...
4165	986	1121	470	238 39	1063-64	37 Sōbhana .	39 Visvāvasu .	8 Kārttika .
4166	987	1122	471	239-40	*1064 65	38 Krōdhin .	40 Parābhava .	...
4167	988	1123	472	240-41	1065 66	39 Visvāvasu .	41 Plavanga .	...
4168	989	1124	473	241-42	1066 67	40 Parābhava .	42 Kīlaka .	5 Srāvaṇa .
4169	990	1125	474	242-43	1067-68	41 Plavanga .	43 Saumya .	...
4170	991	1126	475	243-44	*1068 69	42 Kīlaka .	44 Sādhāraṇa .	...

† By the " Indian Calendar" 6 Bhādrapada was the intercalated month.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

			COMMENCEMENT OF THE			
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year
Day and month, A.D.	Week-day.	Time of mean Mēsha-samkrāntı	Day and month, A.D	Week-day.	a (here$=t$, the index of the tithi)	
13	14	17	19	20	23	1
		H M S.				
25 Mar. (85) .	1 Sun. .	5 32 30	2 Mar (62)	6 Fri. .	19 4454	4146
25 Mar (84)	2 Mon. .	11 45 0	21 Mar. (80)	5 Thur. .	54·0850	4147
25 Mar. (84) .	3 Tues. .	17 57 30	11 Mar. (70)	3 Tues .	268·4003	4148
26 Mar (85) . .	5 Thur. .	0 10 0	28 Feb (59)	0 Sat. .	144 0838	4149
25 Mar (85) . .	6 Fri. .	6 22 30	18 Mar (78) .	6 Fri .	178 7233	4150
25 Mar (84) . .	0 Sat .	12 35 0	7 Mar (66)	3 Tues .	54 4067	4151
25 Mar (84) . .	1 Sun. .	18 47 30	25 Feb (56) .	1 Sun .	268·7219	4152
26 Mar (85) . .	3 Tues. .	1 0 0	16 Mar (75) .	0 Sat. .	303 3615	4153
25 Mar (85) . .	4 Wed. .	7 12 30	4 Mar (64) .	4 Wed .	179 0449	4154
25 Mar. (84) . .	5 Thur. .	13 25 0	23 Mar (82) .	3 Tues .	213·6845	4155
25 Mar (84) . .	6 Fri. .	19 37 30	12 Mar (71) .	0 Sat. .	89 3679	4156
26 Mar. (85) . .	1 Sun. .	1 50 0	2 Mar (61) .	5 Thur. .	303·6832	4157
25 Mar (85) . .	2 Mon. .	8 2 30	19 Mar (79) .	3 Tues .	9999·6909 §	4158
25 Mar. (84) . .	3 Tues. .	14 15 0	9 Mar (68) .	1 Sun .	214 0062	4159
25 Mar. (84) . .	4 Wed. .	20 27 30	26 Feb (57) .	5 Thur .	89 6896	4160
26 Mar (85) . .	6 Fri. .	2 40 0	17 Mar (76) .	4 Wed .	124 3292	4161
25 Mar (85) . .	0 Sat. .	8 52 30	5 Mar (65) .	1 Sun. .	0·0126	4162
25 Mar. (84) . .	1 Sun. .	15 5 0	24 Mar. (83) .	0 Sat. .	34 6522	4163
25 Mar. (84) . .	2 Mon. .	21 17 30	14 Mar (73) .	5 Thur .	248 9675	4164
26 Mar. (85) . .	4 Wed. .	3 30 0	3 Mar (62) .	2 Mon. .	124·6509	4165
25 Mar. (85) . .	5 Thur. .	9 42 30	21 Mar (81) .	1 Sun .	159·2905	4166
25 Mar (84) . .	6 Fri .	15 55 0	10 Mar. (69) .	5 Thur .	34 9739	4167
25 Mar. (84) . .	0 Sat. .	22 7 30	28 Feb (59) .	3 Tues .	249 2892	4168
26 Mar (85) .	2 Mon. .	4 20 0	19 Mar (78) .	2 Mon .	283 9288	4169
25 Mar (85) . .	3 Tues. .	10 32 30	7 Mar (67) .	6 Fri .	159 6122	4170

§ As a mean tithi Chaitra Sukla 1 was expunged.　The civil day corresponding to it, i e, the first day of the luni-solar year was as given in cols 19, 20

TABLE

						CONCURRENT YEAR.				
Kali	Śaka.	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA.		Mean Intercalated (adhika) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4171	992	1127	476	244 45	1069 70	43 Saumya	45 Virōdhakṛit	1 Chaitra
4172	993	1128	477	245 46	1070 71	44 Sādhārana	46 Paridhāvin	
4173	994	1129	478	246 47	1071-72	45 Virōdhakrit	47 Pramādin	10 Pausha
4174	995	1130	479	247 48	*1072-73	46 Paridhāvin	48 Ānanda	
4175	996	1131	480	248 49	1073 74	47 Pramādin	49 Rākshasa	
4176	997	1132	481	249 50	1074 75	48 Ānanda	50 Anala	6 Bhādrapada
4177	998	1133	482	250 51	1075 76	49 Rākshasa	51 Pingala †	
4178	999	1134	483	251-52	*1076 77	50 Anala	53 Siddhārthin	
4179	1000	1135	484	252 53	1077 78	51 Pingala	54 Raudra	3 Jyēshtha
4180	1001	1136	485	253 54	1078 79	52 Kālayukta	55 Durmati	
4181	1002	1137	486	254 55	1079 80	53 Siddhārthin	56 Dundubhi	11 Māgha
4182	1003	1138	487	255 56	*1080 81	54 Raudra	57 Rudhirōdgārin	
4183	1004	1139	488	256 57	1081 82	55 Durmati	58 Raktāksha	
4184	1005	1140	489	257 58	1082 83	56 Dundubhi	59 Krōdhana	8 Kārttika
4185	1006	1141	490	258 59	1083 84	57 Rudhirōdgārin	60 Kshaya	
4186	1007	1142	491	259 60	*1084 85	58 Raktāksha	1 Prabhava	
4187	1008	1143	492	260 61	1085 86	59 Krōdhana	2 Vibhava	4 Āshādha
4188	1009	1144	493	261 62	1086 87	60 Kshaya	3 Śukla	
4189	1010	1145	494	262 63	1087 88	1 Prabhava	4 Pramōda	
4190	1011	1146	495	263 64	*1088 89	2 Vibhava	5 Prajāpati	1 Chaitra
4191	1012	1147	496	264 65	1089 90	3 Śukla	6 Angiras	
4192	1013	1148	497	265 66	1090 91	4 Pramōda	7 Śrīmukha	9 Mārgaśira
4193	1014	1149	498	266 67	1091-92	5 Prajāpati	8 Bhāva	
4194	1015	1150	499	267 68	*1092 93	6 Angiras	9 Yuvan	
4195	1016	1151	500	268 69	1093 94	7 Śrīmukha	10 Dhātri	6 Bhādrapada

† 52 Kālayukta was suppressed in the north.

LXXVI—*Contd*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A·D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A D.	Week-day.	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H. M. S.				
25 Mar (84) .	4 Wed.	10 45 0	24 Feb (55) .	3 Tues .	35 2955	4171
25 Mar (84) .	5 Thur.	22 57 30	15 Mar. (74) .	2 Mon. .	69 9351	4172
26 Mar (85) .	0 Sat .	5 10 0	5 Mar (64) .	0 Sat .	284 2504	4173
25 Mar (85) .	1 Sun .	11 22 30	23 Mar. (83) .	6 Fri. .	318 8901	4174
25 Mar (84) .	2 Mon .	17 35 0	12 Mar (71) .	3 Tues .	194 5734	4175
25 Mar (84) .	3 Tues .	23 47 30	1 Mar. (60) .	0 Sat .	70 2568	4176
26 Mar (85) .	5 Thur. .	6 0 0	20 Mar (79) .	6 Fri. .	104 8964	4177
25 Mar. (85) .	6 Fri .	12 12 30	9 Mar (69) . .	4 Wed .	319 2116	4178
25 Mar. (84) .	0 Sat .	18 25 0	26 Feb (57) .	1 Sun. .	194 8950	4179
26 Mar. (85) .	2 Mon. .	0 37 30	17 Mar (76) .	0 Sat .	229 5347	4180
26 Mar. (85) .	3 Tues. .	6 50 0	6 Mar. (65) .	4 Wed .	105 2180	4181
25 Mar. (85) .	4 Wed. .	13 2 30	24 Mar (84) .	3 Tues. .	139 8576	4182
25 Mar. (84) .	5 Thur. .	19 15 0	13 Mar (72) .	0 Sat. .	15 5410	4183
26 Mar. (85) .	0 Sat .	1 27 30	3 Mar (62) .	5 Thur. .	229 8563	4184
26 Mar. (85) .	1 Sun. .	7 40 0	22 Mar (81) .	4 Wed. .	264 4959	4185
25 Mar (85) .	2 Mon. .	13 52 30	10 Mar. (70) .	1 Sun. .	140 1793	4186
25 Mar. (84) .	3 Tues. .	20 5 0	27 Feb (58) .	5 Thur. .	15 8627	4187
26 Mar. (85) .	5 Thur. .	2 17 30	18 Mar (77) .	4 Wed. .	50 5023	4188
26 Mar. (85) .	6 Fri .	8 30 0	8 Mar (67) .	2 Mon. .	264 8176	4189
25 Mar (85) .	0 Sat. .	14 42 30	25 Feb (56) .	6 Fri .	140 5009	4190
25 Mar. (84) .	1 Sun. .	20 55 0	15 Mar (74) .	5 Thur. .	175 1405	4191
26 Mar. (85) .	3 Tues .	3 7 30	4 Mar (63) .	2 Mon. .	50 8239	4192
26 Mar. (85) .	4 Wed .	9 20 0	23 Mar (82) .	1 Sun .	85 4636	4193
25 Mar. (85) .	5 Thur .	15 32 30	12 Mar (72) .	6 Fri. .	299 7788	4194
25 Mar. (84) .	6 Fri. .	21 45 0	1 Mar (60) .	3 Tues .	175·4622	4195

TABLE

						CONCURRENT YEAR			
							Jovian Sahvatsara		Mean Intercalated (adhika) lunar month
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam	A D.		Southern system.	Northern system	
1	2	3	3a	4	5		6	7	8a
4196	1017	1152	501	269-70	1094-95		8 Bhāva	11 Īśvara	.
4197	1018	1153	502	270-71	1095-96		9 Yuvan	12 Bahudhānya	
4198	1019	1154	503	271-72	*1096-97		10 Dhātṛ	13 Pramāthin	3 Jyēshṭha †
4199	1020	1155	504	272-73	1097-98		11 Īśvara	14 Vikrama	
4200	1021	1156	505	273-74	1098-99		12 Bahudhānya	15 Vṛisha	11 Māgha
4201	1022	1157	506	274-75	1099-00		13 Pramāthin	16 Chitrabhānu	...
4202	1023	1158	507	275 76	*1100-01		14 Vikrama	17 Subhānu	
4203	1024	1159	508	276-77	1101-02		15 Vṛisha	18 Tārana	8 Kārttika
4204	1025	1160	509	277-78	1102 03		16 Chitrabhānu	19 Pārthiva	..
4205	1026	1161	510	278 79	1103-04		17 Subhānu	20 Vyaya	..
4206	1027	1162	511	279-80	*1104-05		18 Tāraṇa	21 Sarvajit	4 Āshāḍha
4207	1028	1163	512	280 81	1105 06		19 Pārthiva	22 Sarvadhārin	..
4208	1029	1164	513	281-82	1106 07		20 Vyaya	23 Virōdhin	..
4209	1030	1165	514	282-83	1107-08		21 Sarvajit	24 Vikṛita	1 Chaitra
4210	1031	1166	515	283-84	*1108-09		22 Sarvadhārin	25 Khara	..
4211	1032	1167	516	284 85	1109-10		23 Virōdhin	26 Nandana	9 Mārgaśira
4212	1033	1168	517	285 86	1110-11		24 Vikṛita	27 Vijaya	
4213	1034	1169	518	286-87	1111-12		25 Khara	28 Jaya	
4214	1035	1170	519	287-88	*1112 13		26 Nandana	29 Manmatha	6 Bhādrapada
4215	1036	1171	520	288 89	1113-14		27 Vijaya	30 Durmukha	
4216	1037	1172	521	289 90	1114-15		28 Jaya	31 Hēmalamba	
4217	1038	1173	522	290 91	1115-16		29 Manmatha	32 Vilamba	2 Vaiśākha
4218	1039	1174	523	291-92	*1116 17		30 Durmukha	33 Vikārin	
4219	1040	1175	524	292-93	1117-18		31 Hēmalamba	34 Śārvarin	11 Māgha
4220	1041	1176	525	293 94	1118-19		32 Vilamba	35 Plava	...

By the " *Indian Calendar* " 2 Vaiśākha was intercalated.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mésha-samkrānti.	Day and month, A D	Week-day.	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
26 Mar (85)	1 Sun	3 57 30	20 Mar (79)	2 Mon.	210 1018	4196
26 Mar. (85)	2 Mon	10 10 0	9 Mar. (68)	6 Fri	85 7852	4197
25 Mar (85)	3 Tues	16 22 30	27 Feb (58)	4 Wed	300·1005	4198
25 Mar (84)	4 Wed	22 35 0	16 Mar (75)	2 Mon.	9996 1082†	4199
26 Mar (85)	6 Fri	4 47 30	6 Mar (65)	0 Sat	210·4235	4200
26 Mar (85)	0 Sat	11 0 0	25 Mar (84)	6 Fri	245 0630	4201
25 Mar (85)	1 Sun	17 12 30	13 Mar (73)	3 Tues	120 7464	4202
25 Mar (84)	2 Mon	23 25 0	2 Mar (61)	0 Sat.	9996·4298†	4203
26 Mar (85)	4 Wed.	5 37 30	21 Mar. (80)	6 Fri	31 0694	4204
26 Mar. (85)	5 Thur.	11 50 0	11 Mar. (70)	4 Wed	245 3847	4205
25 Mar (85)	6 Fri.	18 2 30	28 Feb (59)	1 Sun.	121 0681	4206
26 Mar (85)	1 Sun	0 15 0	18 Mar (77)	0 Sat.	155·7077	4207
26 Mar. (85)	2 Mon	6 27 30	7 Mar (66)	4 Wed	31·3911	4208
26 Mar. (85)	3 Tues.	12 40 0	25 Feb (56)	2 Mon	245 7063	4209
25 Mar (85)	4 Wed	18 52 30	15 Mar (75)	1 Sun.	280·3460	4210
26 Mar (85)	6 Fri.	1 5 0	4 Mar (63)	5 Thur.	156 0293	4211
26 Mar. (85)	0 Sat.	7 17 30	23 Mar (82)	4 Wed.	190 6690	4212
26 Mar. (85)	1 Sun.	13 30 0	12 Mar (71)	1 Sun.	66·3524	4213
25 Mar. (85)	2 Mon.	19 42 30	1 Mar (61)	6 Fri.	280 6676	4214
26 Mar. (85)	4 Wed.	1 55 0	20 Mar. (79)	5 Thur.	315·3072	4215
26 Mar. (85)	5 Thur. '	8 7 30	9 Mar. (68)	2 Mon.	190 9905	4216
26 Mar. (85)	6 Fri	14 20 0	26 Feb. (57)	6 Fri.	66 6740	4217
25 Mar (85)	0 Sat	20 32 30	16 Mar (76)	5 Thur.	101·3136	4218
26 Mar. (85)	2 Mon.	2 45 0	6 Mar (65)	3 Tues.	315 6288	4219
26 Mar. (85)	3 Tues	8 57 30	24 Mar (83)	1 Sun.	11 6365	4220

† As a mean tithi Chaitra Śukla 1 was expunged. The civil day corresponding to it, *i.e.*, the first day of the luni solar year was as given in cols. 19, 20.

						JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
Kali	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system.	
1	2	3	3a	4	5	6	7	8a
4221	1042	1177	526	294 95	1119 20	33 Vikārin	36 Śubhakṛit	..
4222	1043	1178	527	295 96	*1120 21	34 Sârvarin	37 Śōbhana	7 Āśvina
4223	1044	1179	528	296 97	1121 22	35 Plava	38 Krōdhin	..
4224	1045	1180	529	297-98	1122 23	36 Śubhakṛit	39 Viśvāvasu	.
4225	1046	1181	530	298 99	1123-24	37 Śōbhana	40 Parābhava	4 Āshāḍha
4226	1047	1182	531	299 00	*1124-25	38 Krōdhin	41 Plavanga	...
4227	1048	1183	532	300 01	1125-26	39 Viśvāvasu	42 Kīlaka	12 Phālguna
4228	1049	1184	533	301-02	1126 27	40 Parābhava	43 Saumya	..
4229	1050	1185	534	302-03	1127-28	41 Plavanga	44 Sādhāraṇa	.
4230	1051	1186	535	303 04	*1128 29	42 Kīlaka	45 Virōdhakṛit	9 Mārgaśira
4231	1052	1187	536	304 05	1129 30	43 Saumya	46 Paridhāvin	.
4232	1053	1188	537	305 06	1130 31	44 Sādhārana	47 Pramādin	.
4233	1054	1189	538	306 07	1131 32	45 Virōdhakṛit	48 Ānanda	6 Bhādrapada
4234	1055	1190	539	307-08	*1132 33	46 Paridhāvin	49 Rākshasa	.
4235	1056	1191	540	308 09	1133 34	47 Pramādin	50 Anala	..
4236	1057	1192	541	309 10	1134 35	48 Ānanda	51 Pingala	2 Vaiśākha
4237	1058	1193	542	310-11	1135 36	49 Rākshasa	52 Kālayukta	
4238	1059	1194	543	311-12	*1136 37	50 Anala	53 Siddhārthin	11 Māgha
4239	1060	1195	544	312-13	1137-38	51 Pingala	54 Raudra	..
4240	1061	1196	545	313-14	1138 39	52 Kālayukta	55 Durmati	
4241	1062	1197	546	314-15	1139-40	53 Siddhārtha	56 Dundubhi	7 Āśvina
4242	1063	1198	547	315-16	*1140 41	54 Raudra	57 Rudhirōdgārin	...
4243	1064	1199	548	316-17	1141-42	55 Durmati	58 Raktāksha	...
4244	1065	1200	549	317-18	1142 43	56 Dundubhi	59 Krōdhana	4 Āshāḍha
4245	1066	1201	550	318-19	1143-44	57 Rudhirōdgārin	60 Kshaya	...

CONCURRENT YEAR.

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year
Day and month, A D	Week day	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M. S				
26 Mar. (85) .	4 Wed .	15 10 0	14 Mar (73)	6 Fri .	225 9518	4221
25 Mar. (85) .	5 Thur. .	21 22 30	2 Mar. (62)	3 Tues	101 6352	4222
26 Mar. (85) .	0 Sat	3 35 0	21 Mar (80)	2 Mon	136 2748	4223
26 Mar (85) .	1 Sun .	9 47 30	10 Mar (69)	6 Fri .	11 9582	4224
26 Mar (85) .	2 Mon .	16 0 0	28 Feb (59) .	4 Wed	226 2735	4225
25 Mar (85) .	3 Tues .	22 12 30	18 Mar (78)	3 Tues. .	260 9131	4226
26 Mar (85) .	5 Thur. .	4 25 0	7 Mar. (66)	0 Sat .	136 5965	4227
26 Mar (85)	6 Fri	10 37 30	26 Mar (85)	6 Fri. .	171 2360	4228
26 Mar (85) .	0 Sat .	16 50 0	15 Mar (74) .	3 Tues	46 9195	4229
25 Mar (85) .	1 Sun .	23 2 30	4 Mar (64)	1 Sun .	261 2348	4230
26 Mar. (85)	3 Tues .	5 15 0	23 Mar (82)	0 Sat. .	295 8744	4231
26 Mar. (85) .	4 Wed. .	11 27 30	12 Mar (71)	4 Wed .	171 5578	4232
26 Mar (85) .	5 Thur.	17 40 0	1 Mar (60) .	1 Sun	47 2411	4233
25 Mar (85) .	6 Fri .	23 52 30	19 Mar (79) .	0 Sat	81 8807	4234
26 Mar (85) .	1 Sun .	6 5 0	9 Mar (69)	5 Thur	296 1960	4235
26 Mar (85) .	2 Mon .	12 17 30	26 Feb (57) .	2 Mon. .	171 8794	4236
26 Mar (85) .	3 Tues .	18 30 0	17 Mar (76) .	1 Sun	206 5190	4237
26 Mar (86) .	5 Thur .	0 42 30	5 Mar (65)	5 Thur .	82 2024	4238
26 Mar. (85) .	6 Fri .	6 55 0	24 Mar (83)	4 Wed. .	116 8420	4239
26 Mar (85) .	0 Sat .	13 7 30	14 Mar (73) .	2 Mon	331 1573	4240
26 Mar (85) .	1 Sun .	19 20 0	3 Mar (62)	6 Fri. .	206 8407	4241
26 Mar (86) .	3 Tues. .	1 32 30	21 Mar. (81) .	5 Thur	241 4803	4242
26 Mar (85) .	4 Wed. .	7 45 0	10 Mar (69) .	2 Mon .	117 1637	4243
26 Mar (85) .	5 Thur .	13 57 30	28 Feb (59) .	0 Sat .	331 4790	4244
26 Mar. (85) .	6 Fri. .	20 10 0	18 Mar (77) .	5 Thur .	27 4867	4245

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
						Jovian Samvatsara		
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system.	
1	2	3	3a	4	5	6	7	fa
4246	1067	1202	551	319-20	*1144 45	58 Raktāksha	1 Prabhava	12 Phālguna
4247	1068	1203	552	320 21	1145 46	59 Krōdhana	2 Vibhava	
4248	1069	1204	553	321-22	1146 47	60 Kshaya	3 Śukla	
4249	1070	1205	554	322 23	1147-48	1 Prabhava	4 Pramōda	9 Mārgaśira
4250	1071	1206	555	323-24	*1148 49	2 Vibhava	5 Prajāpati	
4251	1072	1207	556	324 25	1149 50	3 Śukla	6 Angiras	
4252	1073	1208	557	325 26	1150 51	4 Pramōda	7 Śrīmukha	5 Śrāvaṇa
4253	1074	1209	558	326 27	1151-52	5 Prajāpati	8 Bhāva	...
4254	1075	1210	559	327-28	*1152 53	6 Angiras	9 Yuvan	
4255	1076	1211	560	328 29	1153 54	7 Śrīmukha	10 Dhātri	2 Vaiśākha
4256	1077	1212	561	329 30	1154 55	8 Bhāva	11 Īśvara	
4257	1078	1213	562	330-31	1155 56	9 Yuvan	12 Bahudhānya	10 Pausha
4258	1079	1214	563	331-32	*1156 57	10 Dhātri	13 Pramāthin	..
4259	1080	1215	564	332-33	1157 58	11 Īśvara	14 Vikrama	
4260	1081	1216	565	333 34	1158-59	12 Bahudhānya	15 Vrisha	7 Āśvina
4261	1082	1217	566	334-35	1159 60	13 Pramāthin	16 Chitrabhānu	...
4262	1083	1218	567	335 36	*1160 61	14 Vikrama	17 Subhānu*	
4263	1084	1219	568	336 37	1161-62	15 Vrisha	19 Pārthiva	3 Jyēshṭha
4264	1085	1220	569	337-38	1162-63	16 Chitrabhānu	20 Vyaya	
4265	1086	1221	570	338-39	1163 64	17 Subhānu	21 Sarvajit	12 Phālguna
4266	1087	1222	571	339-40	*1164-65	18 Tārana	22 Sarvadhārin	
4267	1088	1223	572	340-41	1165 66	19 Pārthiva	23 Virōdhin	
4268	1089	1224	573	341-42	1166-67	20 Vyaya	24 Vikrita	8 Kārttika
4269	1090	1225	574	342-43	1167-68	21 Sarvajit	25 Khara	
4270	1091	1226	575	343-44	*1168-69	22 Sarvadhārin	26 Nandana	

* 18 Tārana was suppressed in the north.

LXXVI—*Contd*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year.
Day and month, A.D.	Week-day.	Time of mean Mesha-samkrānti	Day and month, A.D	Week-day.	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H　M　S				
26 Mar (86) .	1 Sun	2　22　30	7 Mar (67)　.	3 Tues	241 8019	4246
26 Mar (85)	2 Mon　.	8　35　0	26 Mar. (85)　.	2 Mon　.	276 4415	4247
26 Mar (85)　.	3 Tues	14　47　30	15 Mar (74)　.	6 Fri　.	152 1249	4248
26 Mar (85)　.	4 Wed　.	21　0　0	4 Mar (63)	3 Tues　.	27 8084	4249
26 Mar. (86)　.	6 Fri　.	3　12　30	22 Mar (82)　.	2 Mon	62·4479	4250
26 Mar (85)　.	0 Sat　.	9　25　0	12 Mar (71)　.	0 Sat	276 7631	4251
26 Mar (85) .	1 Sun　.	15　37　30	1 Mar (60)　.	4 Wed　.	152·4465	4252
26 Mar (85)　.	2 Mon.　.	21　50　0	20 Mar (79)　.	3 Tues	187 0861	4253
26 Mar (86)　.	4 Wed　.	4　2　30	8 Mar. (68)　.	0 Sat　.	62 7695	4254
26 Mar (85) .	5 Thur.　.	10　15　0	26 Feb (57)　.	5 Thur	277 0848	4255
26 Mar (85) .　.	6 Fri.　.	16　27　30	17 Mar (76)　.	4 Wed　.	311 7245	4256
26 Mar (85)　.　.	0 Sat　.	22　40　0	6 Mar (65)　.	1 Sun　.	187 4078	4257
26 Mar (86)　.　.	2 Mon	4　52　30	24 Mar. (84)　.	0 Sat　.	222·0474	4258
26 Mar (85) .　.	3 Tues　.	11　5　0	13 Mar (72)　.	4 Wed.　.	98 1308	4259
26 Mar (85) .　.	4 Wed.　.	17　17　30	3 Mar (62)　.	2 Mon.	312 0461	4260
26 Mar (85) .	5 Thur	23　30　0	21 Mar. (80)　.	0 Sat　.	8 0538	4261
26 Mar (86) .　.	0 Sat	5　42　30	10 Mar (70)　.	5 Thur.　.	222 3691	4262
26 Mar. (85)　.　.	1 Sun.　.	11　55　0	27 Feb (58)　.	2 Mon	98 4525	4263
26 Mar. (85)	2 Mon	18　7　30	18 Mar (77)　.	1 Sun	132 6822	4264
27 Mar. (86)　.	4 Wed　.	0　20　0	7 Mar (66)　.	5 Thur	8 3755	4265
26 Mar. (86)　.	5 Thur　.	6　32　30	25 Mar (85)　.	4 Wed.	43 0151	4266
26 Mar (85)　.　.	6 Fri　.	12　45　0	15 Mar (74)　.	2 Mon	257 3504	4267
26 Mar (85) .　.	0 Sat　.	18　57　30	4 Mar (63)　.	6 Fri　.	133 0138	4268
27 Mar. (86)　.	2 Mon　.	1　10　0	23 Mar (82)　.	5 Thur　.	167 6434	4269
26 Mar. (86)　.	3 Tues.　.	7　22　30	11 Mar (71)　.	2 Mon	43 3308	4270

TABLE

						JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal.	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4271	1092	1227	576	344 45	1169 70	23 Virōdhin	27 Vijaya	5 Śrāvaṇa
4272	1093	1228	577	345 46	1170 71	24 Vikṛita	28 Jaya	..
4273	1094	1229	578	346 47	1171-72	25 Khara	29 Manmatha	...
4274	1095	1230	579	347 48	*1172-73	26 Nandana	30 Durmukha	2 Vaiśākha
4275	1096	1231	580	348 49	1173 74	27 Vijaya	31 Hēmalamba	...
4276	1097	1232	581	349 50	1174-75	28 Jaya	32 Vilamba	10 Pausha
4277	1098	1233	582	350 51	1175-76	29 Manmatha	33 Vikārin	.
4278	1099	1234	583	351-52	*1176 77	30 Durmukha	34 Śārvarin	'
4279	1100	1235	584	352 53	1177-78	31 Hēmalamba	35 Plava	7 Āśvina
4280	1101	1236	585	353 54	1178 79	32 Vilamba	36 Śubhakṛit	..
4281	1102	1237	586	354-55	1179 80	33 Vikārin	37 Śōbhana	
4282	1103	1238	587	355 56	*1180 81	34 Sārvarin	38 Krōdhin	3 Jyēshtha
4283	1104	1239	588	356 57	1181-82	35 Plava	39 Viśvāvasu	
4284	1105	1240	589	357-58	1182 83	36 Śubhakṛt	40 Parābhava	12 Phālguna
4285	1106	1241	590	358-59	1183 84	37 Śōbhana	41 Plavanga	
4286	1107	1242	591	359 60	*1184 85	38 Krōdhin	42 Kīlaka	.
4287	1108	1243	592	360 61	1185 86	39 Viśvāvasu	43 Saumya	8 Kārttika
4288	1109	1244	593	361 62	1186 87	40 Parābhava	44 Sādhāraṇ	..
4289	1110	1245	594	362 63	1187-88	41 Plavanga	45 Virōdhakṛt	.
4290	1111	1246	595	363 64	*1188-89	42 Kīlaka	46 Paridhāvin	5 Śrāvana
4291	1112	1247	596	364 65	1189 90	43 Saumya	47 Pramādin	.
4292	1113	1248	597	365 66	1190 91	44 Sādhārana	48 Ānanda	.
4293	1114	1249	598	366 67	1191-92	45 Virōdhakṛt	49 Rākshasa	1 Chaitra
4294	1115	1250	599	367 68	*1192 93	46 Paridhāvin	50 Anala	
4295	1116	1251	600	368 69	1193 94	47 Pramādin	51 Pingala	10 Pausha

LXXVI—Contd.

<div align="right">1 Ārya Siddhānta, mean system.</div>

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year
Day and month, A D	Week day.	Time of mean Mesha-samkrānti.	Day and month, A D	Week-day	*a* (here=*t*, the index of the tithi).	
13	14	17	19	20	23	1
		H M S				
26 Mar (85) .	4 Wed .	13 35 0	1 Mar (60) .	0 Sat .	257·6521	4271
26 Mar (85)	5 Thur .	19 47 30	20 Mar (79) .	6 Fri .	292 2917	4272
27 Mar. (86)	0 Sat .	2 0 0	9 Mar (68) .	3 Tues .	167 9751	4273
26 Mar. (86) .	1 Sun. .	8 12 30	26 Feb. (57) .	0 Sat .	43 6684	4274
26 Mar (85) .	2 Mon .	14 25 0	16 Mar (75) .	6 Fri. .	78 2981	4275
26 Mar (85) .	3 Tues .	20 37 30	6 Mar (65) .	4 Wed. .	292 6133	4276
27 Mar (86) .	5 Thur. .	2 50 0	25 Mar (84) .	3 Tues. .	327 2528	4277
26 Mar (86) .	6 Fri. .	9 2 30	13 Mar (73) .	0 Sat .	202 9372	4278
26 Mar (85) .	0 Sat .	15 15 0	2 Mar (61) .	4 Wed. .	78 6196	4279
26 Mar (85) .	1 Sun .	21 27 30	21 Mar. (80) .	3 Tues. .	113 2593	4280
27 Mar (86) .	3 Tues .	3 40 0	11 Mar. (70) .	1 Sun. .	¿327 5745	4281
26 Mar. (86) .	4 Wed. .	9 52 30	28 Feb (59) .	5 Thur. .	203 2579	4282
26 Mar (85) .	5 Thur. .	16 5 0	18 Mar (77) .	4 Wed. .	237 8975	4283
26 Mar (85) .	6 Fri. .	22 17 30	7 Mar (66) .	1 Sun. .	113 5809	4284
27 Mar. (86) .	1 Sun. .	4 30 0	26 Mar (85) .	0 Sat. .	148 2205	4285
26 Mar. (86) .	2 Mon. .	10 42 30	14 Mar (74) .	4 Wed. .	23 9039	4286
26 Mar. (85) .	3 Tues .	16 55 0	4 Mar (63) .	2 Mon. .	238 2192	4287
26 Mar (85) .	4 Wed. .	23 7 30	23 Mar (82) .	1 Sun. .	272 8588	4288
27 Mar (86) .	6 Fri. .	5 20 0	12 Mar (71) .	5 Thur. .	148 5422	4289
26 Mar (86) .	0 Sat .	11 32 30	29 Feb (60) .	2 Mon. .	24 2256	4290
26 Mar (85) .	1 Sun. .	17 45 0	19 Mar (78) .	1 Sun. .	58 8452	4291
26 Mar (85) .	2 Mon .	23 57 30	9 Mar (68) .	6 Fri .	273 1805	4292
27 Mar (86) .	4, Wed. .	6 10 0	26 Feb (57) .	3 Tues .	148 8038	4293
26 Mar. (86) .	5 Thur .	12 22 30	16 Mar (76) .	2 Mon .	183 5035	4294
26 Mar. (85) .	6 Fri. .	18 35 0	5 Mar (64) .	6 Fri .	59 1868	4295

TABLE

				CONCURRENT YEAR				
Kali.	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A.D	Jovian Samvatsara Southern system	Northern system	Mean Intercalated (adhika) lunar month
1	2	3	3a	4	5	6	7	8a
4296	1117	1252	601	369-70	1194-95	48 Ānanda	52 Kālayukta	...
4297	1118	1253	602	370 71	1195 96	49 Rākshasa	53 Siddhārthin	..
4298	1119	1254	603	371-72	*1196 97	50 Anala	54 Raudra	6 Bhādrapada
4299	1120	1255	604	372 73	1197-98	51 Pingala	55 Durmati	..
4300	1121	1256	605	373 74	1198-99	52 Kālayukta	56 Dundubhi	..
4301	1122	1257	606	374-75	1199 00	53 Siddhārthin	57 Rudhirōdgārin	3 Jyēshtha
4302	1123	1258	607	375 76	*1200 01	54 Raudra	58 Raktāksha	..
4303	1124	1259	608	376 77	1201-02	55 Durmati	59 Krōdhana	11 Māgha
4304	1125	1260	609	377-78	1202 03	56 Dundubhi	60 Kshaya	...
4305	1126	1261	610	378-79	1203 04	57 Rudhirōdgārin	1 Prabhava	...
4306	1127	1262	611	379 80	*1204 05	58 Raktāksha	2 Vibhava	8 Kārttika
4307	1128	1263	612	380 81	1205-06	59 Krōdhana	3 Śukla	..
4308	1129	1264	613	381-82	1206 07	60 Kshaya	4 Pramōda	...
4309	1130	1265	614	382-83	1207-08	1 Prabhava	5 Prajāpati	5 Śrāvaṇa
4310	1131	1266	615	383 84	*1208 09	2 Vibhava	6 Angiras	..
4311	1132	1267	616	384 85	1209-10	3 Śukla	7 Śrīmukha	..
4312	1133	1268	617	385 86	1210 11	4 Pramōda	8 Bhāva	1 Chaitra
4313	1134	1269	618	386 87	1211-12	5 Prajāpati	9 Yuvan	...
4314	1135	1270	619	387-88	*1212-13	6 Angiras	10 Dhātri	10 Pausha
4315	1136	1271	620	388 89	1213-14	7 Śrīmukha	11 Īśvara	
4316	1137	1272	621	389-90	1214-15	8 Bhāva	12 Bahudhānya	..
4317	1138	1273	622	390-91	1215-16	9 Yuvan	13 Pramāthin	6 Bhādrapada
4318	1139	1274	623	391 92	*1216-17	10 Dhātri	14 Vikrama	...
4319	1140	1275	624	392 93	1217-18	11 Īśvara	15 Vrisha	..
4320	1141	1276	625	393 94	1218 19	12 Bahudhānya	16 Chitrabhānu	3 Jyēshtha

LXXVI—*Contd*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year.
Day and month, A D	Week day	Time of mean Mēsha-samkrānti	Day and month, A D	Week-day	a (here $=t$, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
27 Mar. (86) .	1 Sun. .	0 47 30	24 Mar (83) .	5 Thur. .	93 8264	4296
27 Mar (86) .	2 Mon .	7 0 0	14 Mar (73)	3 Tues .	308 1417	4297
26 Mar (86) .	3 Tues.	13 12 30	2 Mar. (62)	0 Sat .	183 8251	4298
26 Mar. (85) .	4 Wed. .	19 25 0	21 Mar (80)	6 Fri. .	218 4647	4299
27 Mar. (86)	6 Fri	1 37 3)	10 Mar (69) .	3 Tues	94 1481	4300
27 Mar (86) .	0 Sat	7 50 0	28 Feb (59)	1 Sun	308 4634	4301
26 Mar. (86) .	1 Sun	14 2 30	17 Mar (77)	6 Fri .	4 4711	4302
26 Mar (85)	2 Mon	20 15 0	7 Mar (66)	4 Wed.	218 7864	4303
27 Mar. (86) .	4 Wed	2 27 30	26 Mar (85)	3 Tues	253 4359	4304
27 Mar (86)	5 Thur .	8 40 0	15 Mar (74)	0 Sat .	129 1004	4305
26 Mar (86) .	6 Fri. .	14 52 30	3 Mar (63) .	4 Wed	4 7027	4306
26 Mar (85)	0 Sat .	21 5 0	22 Mar (81)	3 Tues .	39 4324	4307
27 Mar (86)	2 Mon	3 17 30	12 Mar (71) .	1 Sun .	253 7477	4308
27 Mar (86) .	3 Tues	9 30 0	1 Mar (60) .	5 Thur .	129 4311	4309
26 Mar (86) .	4 Wed .	15 42 30	19 Mar. (79)	4 Wed .	164 0707	4310
26 Mar (85)	5 Thur .	21 55 0	8 Mar (67)	1 Sun	39 7540	4311
27 Mar (86) .	0 Sat .	4 7 30	26 Feb (57) .	6 Fri	254 0693	4312
27 Mar (86)	1 Sun	10 20 0	17 Mar (76) .	5 Thur .	288 7089	4313
26 Mar (86)	2 Mon	16 32 30	5 Mar (65) .	2 Mon .	164 3923	4314
26 Mar (85)	3 Tues	22 45 0	24 Mar (83) .	1 Sun	199 0319	4315
27 Mar (86)	5 Thur	4 57 30	13 Mar (72)	5 Thur .	74 7152	4316
27 Mar (86)	6 Fri	11 10 0	3 Mar (62)	3 Tues	289 0306	4317
26 Mar (86) .	0 Sat	17 22 30	21 Mar (81)	2 Mon	323 6702	4318
26 Mar (85)	1 Sun	23 35 0	10 Mar (69)	6 Fri	199 3535	4319
27 Mar. (86)	3 Tues	5 47 30	27 Feb (58) .	3 Tues	75 0369	4320

TABLE

			CONCURRENT YEAR.			Jovian Samvatsara.		Mean Intercalated (adhika) lunar month
Kalı	Śaka	Chaitrādı Vıkrama	Mēshādı solar year in Bengal	Kollam	A D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4321	1142	1277	626	394 95	1219 20	13 Pramāthın	17 Subhānu	..
4322	1143	1278	627	395 96	*1220 21	14 Vıkrama	18 Tāraṇa .	11 Māgha
4323	1144	1279	628	396 97	1221 22	15 Vṛısha	19 Pārthıva	.
4324	1145	1280	629	297-98	1222 23	16 Chıtrabhānu	20 Vyaya .	
4325	1146	1281	630	398 99	1223 24	17 Subhānu	21 Sarvajıt	8 Kārttıka
4326	1147	1282	631	399 00	*1224-25	18 Tāraṇa .	22 Sarvadhārın .	..
4327	1148	1283	632	400 01	1225-26	19 Pārthıva	23 Vırōdhın	..
4328	1149	1284	633	401 02	1226 27	20 Vyaya .	24 Vıkṛıta .	4 Āshāḍha
4329	1150	1285	634	402 03	1227-28	21 Sarvajıt	25 Khara .	
4330	1151	1286	635	403 04	*1228 29	22 Sarvadhārın .	26 Nandana	.
4331	1152	1287	636	404 05	1229 30	23 Vırōdhın	27 Vıjaya .	1 Chaitra
4332	1153	1288	637	405 06	1230 31	24 Vıkṛıta .	28 Jaya .	
4333	1154	1289	638	406-07	1231-32	25 Khara .	29 Manmatha	9 Mārgaśıra
4334	1155	1290	639	407-08	*1232-33	26 Nandana	30 Durmukha .	.
4335	1156	1291	640	408-09	1233-34	27 Vıjaya .	31 Hēmalamba .	.
4336	1157	1292	641	409-10	1234-35	28 Jaya .	32 Vılamba .	6 Bhādrapada
4337	1158	1293	642	410 11	1235 36	29 Manmatha	33 Vıkārın	.
4338	1159	1294	643	411-12	*1236-37	30 Durmukha .	34 Sārvarın	.
4339	1160	1295	644	412-13	1237 38	31 Hēmalamba .	35 Plava .	2 Vaısākha
4340	1161	1296	645	413-14	1238 39	32 Vılamba .	36 Śubhakṛıt	..
4341	1162	1297	646	414 15	1239 40	33 Vıkārın	37 Śōbhana .	11 Māgha
4342	1163	1298	647	415 16	*1240 41	34 Sārvarın	38 Krōdhın	..
4343	1164	1299	648	416 17	1241-42	35 Plava .	39 Vıśvāvasu .	...
4344	1165	1300	649	417-18	1242 43	36 Śubhakṛıt	40 Parābhava .	7 Āśvına
4345	1166	1301	650	418-19	1243-44	37 Śōbhana	41 Plavanga .	...

LXXVI—*Contd*

1 Àrya Slddhānta, mean system .

COMMENCEMENT OF THE						Kali year
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D	Week day	Time of mean Misha-samkrānti	Day and month, A D.	Week-day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
27 Mar (86) . .	4 Wed .	12 0 0	18 Mar (77) .	2 Mon .	109 6765	4321
26 Mar (86)	5 Thur. .	18 12 30	7 Mar (67)	0 Sat .	323 9918	4322
27 Mar (86) .	0 Sat .	0 25 0	25 Mar (84) .	5 Thur	19·9995	4323
27 Mar (86)	1 Sun .	6 37 30	15 Mar (74) .	3 Tues	234 3148	4324
27 Mar (86) . .	2 Mon .	12 50 0	4 Mar (63) .	0 Sat .	109 9982	4325
26 Mar (86)	3 Tues .	19 2 30	22 Mar (82) .	6 Fri. .	144 6378	4326
27 Mar (86) .	5 Thur .	1 15 0	11 Mar (70) .	3 Tues .	20 3212	4327
27 Mar (86) .	6 Fri .	7 27 30	1 Mar. (60) .	1 Sun. .	234 6305	4328
27 Mar (86)	0 Sat .	13 40 0	20 Mar (79) .	0 Sat. .	269 2701	4329
26 Mar (86) .	1 Sun ,	19 52 30	8 Mar (68) .	4 Wed .	144 9594	4330
27 Mar (86)	3 Tues .	2 5 0	25 Feb (56) .	1 Sun. .	20 6428	4331
27 Mar (86) . .	4 Wed .	8 17 30	16 Mar (75) .	0 Sat .	55 2824	4332
27 Mar. (86) . .	5 Thur .	14 30 0	6 Mar (65) .	5 Thur .	269 5977	4333
26 Mar (86) . .	6 Fri. .	20 42 30	24 Mar (84) .	4 Wed. .	304 2373	4334
27 Mar (86) . .	1 Sun .	2 55 0	13 Mar (72) .	1 Sun	179 9207	4335
27 Mar (86) . .	2 Mon .	9 7 30	2 Mar (61) .	5 Thur .	55 6041	4336
27 Mar (86) . .	3 Tues .	15 20 0	21 Mar (80) .	4 Wed. .	90 2437	4337
26 Mar. (86) . .	4 Wed. .	21 32 30	10 Mar (70) .	2 Mon .	304·5590	4338
27 Mar. (86) . .	6 Fri. .	3 45 0	27 Feb (58) .	6 Fri. .	180 2424	4339
27 Mar. (86) .	0 Sat. .	9 57 30	18 Mar. (77) .	5 Thur. .	214 8820	4340
27 Mar. (86) . .	1 Sun .	16 10 0	7 Mar (66) .	2 Mon. .	90 5654	4341
26 Mar (86) . .	2 Mon .	22 22 30	25 Mar. (85) .	1 Sun. .	125 2049	4342
27 Mar. (86) . .	4 Wed .	4 35 0	14 Mar. (73) .	5 Thur. .	0 8884	4343
27 Mar. (86) . .	5 Thur. .	10 47 30	4 Mar. (63) .	3 Tues .	215 2037	4344
27 Mar. (86) . .	6 Fri. .	17 0 0	23 Mar (82) .	2 Mon. .	249 8433	4345

TABLE

						JOVIAN SAMVATSARA		Mean Interralated (adhika) lunar month
				CONCURRENT YEAR				
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam.	A D	Southern system	Northern system	
1	2	3	3à	4	5	6	7	8a
4346	1167	1302	651	419-20	*1244 45	38 Krōdhin .	42 Kílaka . •	. .
4347	1168	1303	652	420 21	1245-46	39 Viśvāvasu	43 Saumya† .	4 Ashādha •
4348	1169	1304	653	421-22	1246 47	40 Parābhava .	45 Virōdhakṛit .	•••
4349	1170	1305	654	422-23	1247-48	41 Plavanga	46 Paridhāvin .	••
4350	1171	1306	655	423 24	*1248 49	42 Kílaka .	47 Pramādin .	1 Chaitra •
4351	1172	1307	656	424-25	1249 50	43 Saumya	48 Ānanda ••	• •
4352	1173	1308	657	425 26	1250 51	44 Sādhārana .	49 Rākshasa .	9 Mārgaśira •
4353	1174	1309	658	426-27	1251-52	45 Virōdhakṛit .	50 Anala .	•
4354	1175	1310	659	427-28	*1252-53	46 Paridhāvin .	51 Pingala .	••
4355	1176	1311	660	428 29	1253 54	47 Pramādin .	52 Kālayukta .	6 Bhādrapada
4356	1177	1312	661	429 30	1254-55	48 Ānanda ¯ .	53 Siddhārthin .	•
4357	1178	1313	662	430 31	1255 56	49 Rākshasa .	54 Raudra .	
4358	1179	1314	663	431-32	*1256 57	50 Anala .	55 Durmati .	2 Vaiśākha •
4359	1180	1315	664	432 33	1257-58	51 Pingala .	56 Dundubhi .	•
4360	1181	1316	665	433 34	1258 59	52 Kālayukta .	57 Rudhirōdgārin .	11 Māgha •
4361	1182	1317	666	434 35	1259 60	53 Siddhārthin .	58 Raktāksha .	•••
4362	1183	1318	667	435-36	*1260 61	54 Raudra .	59 Krōdhana .	•••
4363	1184	1319	668	436 37	1261 62	55 Durmati .	60 Kshaya .	7 Āśvina •
4364	1185	1320	669	437-38	1262 63	56 Dundubhi .	1 Prabhava .	•••
4365	1186	1321	670	438-39	1263-64	57 Rudhirōdgārin	2 Vibhava .	•••
4366	1187	1322	671	439 40	*1264-65	58 Raktāksha .	3 Śukla .	4 Āshādha •
4367	1188	1323	672	440-41	1265-66	59 Krōdhana .	4 Pramōda .	•
4368	1189	1324	673	441 42	1266 67	60 Kshaya .	5 Prajāpati .	12 Phālguna •
4369	1190	1325	674	442 43	1267 68	1 Prabhava .	6 Angiras .	
4370	1191	1326	675	443 44	*1268 69	2 Vibhava .	7 Śrīmukha .	

† 44, Sādhāraṇa, was suppressed in the north by the mean system, but 45 Virōdhakṛit by the true system By the latter system the year A.D 1246-47 was called in the north, " Sādhāraṇa"

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali year
Day and month, A.D.	Week day	Time of mean Mēsha-samkrānti	Day and month, A D	Week day	a (here $=t$, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
26 Mar (86) .	0 Sat .	23 12 30	11 Mar (71)	6 Fri	125 5266	4346
27 Mar. (86) . .	2 Mon	5 25 0	28 Feb (59)	3 Tues	1 2100	4347
27 Mar (86) .	3 Tues	11 37 30	19 Mar (78)	2 Mon	35 8196	4348
27 Mar (86) .	4 Wed. .	17 50 0	9 Mar (68)	0 Sat .	250 1649	4349
27 Mar (87) . .	6 Fri.	0 2 30	26 Feb (57)	4 Wed	125 8482	4350
27 Mar. (86) . .	0 Sat .	6 15 0	16 Mar (75)	3 Tues .	160 4878	4351
27 Mar (86) .	1 Sun .	12 27 30	5 Mar (64)	0 Sat	36 1712	4352
27 Mar (86) .	2 Mon	18 40 0	24 Mar (83)	6 Fri	70 8109	4353
27 Mar (87) . .	4 Wed	0 52 30	13 Mar (73)	4 Wed .	285 1262	4354
27 Mar (86)	5 Thur.	7 5 0	2 Mar (61)	1 Sun .	160 8095	4355
27 Mar (86) . .	6 Fri	13 17 30	21 Mar (80)	0 Sat .	195 4491	4356
27 Mar (86)	0 Sat .	19 30 0	10 Mar (69)	4 Wed	71 1325	4357
27 Mar (87) .	2 Mon .	1 42 30	28 Feb (59) .	2 Mon	285 4478	4358
27 Mar (86)	3 Tues	7 55 0	18 Mar (77) .	1 Sun .	320 0874	4359
27 Mar (86) . .	4 Wed	14 7 30	7 Mar (66)	5 Thur	195 7708	4360
27 Mar (86) .	5 Thur	20 20 0	26 Mar (85)	4 Wed	230 4104	4361
27 Mar (87) .	0 Sat .	2 32 30	14 Mar (74)	1 Sun	106 0938	4362
27 Mar (86)	1 Sun	8 45 0	4 Mar (63)	6 Fri	320 4091	4363
27 Mar (86) .	2 Mon	14 57 30	22 Mar (81) .	4 Wed .	16 4168	4364
27 Mar (86) . .	3 Tues	21 10 0	12 Mar (71) .	2 Mon .	230 7321	4365
27 Mar. (87)	5 Thur	3 22 30	29 Feb (60)	6 Fri	106 4155	4366
27 Mar. (86) .	6 Fri	9 35 0	19 Mar (78) .	5 Thur	141 0551	4367
27 Mar. (86) . .	0 Sat .	15 47 30	8 Mar (67)	2 Mon .	16 7384	4368
27 Mar (86)	1 Sun .	22 0 0	27 Mar (86) .	1 Sun .	51·3780	4369
27 Mar (87) . .	3 Tues .	4 12 30	16 Mar. (76) .	6 Fri. .	265 6934	4370

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
						JOVIAN SAMVATSARA.		
Kali	Saka	Chaitrādi Vikrama	Meshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4371	1192	1327	676	444 45	1269 70	3 Śukla	8 Bhāva	9 Mārgaśira .
4372	1193	1328	677	445 46	1270 71	4 Pramōda	9 Yuvan .	.
4373	1194	1329	678	446 47	1271-72	5 Prajāpati .	10 Dhātṛ .	.
4374	1195	1330	679	447 48	*1272 73	6 Angiras	11 Īsvara	5 Śrāvana .
4375	1196	1331	680	448 49	1273 74	7 Śrīmukha	12 Bahudhānya	.
4376	1197	1332	681	449 50	1274-75	8 Bhāva	13 Pramāthin .	.
4377	1198	1333	682	450 51	1275-76	9 Yuvan .	14 Vikrama .	2 Vaiśākha .
4378	1199	1334	683	451 52	*1276 77	10 Dhātṛ	15 Vrisha .	.
4379	1200	1335	684	452 53	1277-78	11 Īsvara	16 Chitrabhānu	10 Pausha .
4380	1201	1336	685	453 54	1278-79	12 Bahudhānya	17 Subhānu .	..
4381	1202	1337	686	454 55	1279 80	13 Pramāthin	18 Tārana .	.
4382	1203	1338	687	455 56	*1280 81	14 Vikrama .	19 Pārthiva .	7 Āśvina .
4383	1204	1339	688	456 57	1281 82	15 Vrisha	20 Vyaya . .	..
4384	1205	1340	689	457-58	1282 83	16 Chitrabhānu	21 Sarvajit .	.
4385	1206	1341	690	458 59	1283 84	17 Subhānu .	22 Sarvadhārin	4 Āshādha .
4386	1207	1342	691	459 60	*1284 85	18 Tārana .	23 Virōdhin .	.
4387	1208	1343	692	460 61	1285 86	19 Pārthiva .	24 Vikrita .	12 Phālguna .
4388	1209	1344	693	461-62	1286 87	20 Vyaya	25 Khara .	..
4389	1210	1345	694	462 63	1287-88	21 Sarvajit .	26 Nandana .	...
4390	1211	1346	695	463 64	*1288 89	22 Sarvadhārin .	27 Vijaya . .	9 Mārgaśira
4391	1212	1347	696	464 65	1289 90	23 Virōdhin .	28 Jaya . .	.
4392	1213	1348	697	465 66	1290 91	24 Vikrita .	29 Manmatha	.
4393	1214	1349	698	466 67	1291 92	25 Khara .	30 Durmukha .	5 Śrāvana .
4394	1215	1350	699	467 68	*1292 93	26 Nandana .	31 Hemalamba	.
4395	1216	1351	700	468 69	1293 94	27 Vijaya . .	32 Vilamba .	..

LXXVI—*Contd.*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A D	Week day	a (here$=t$, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
27 Mar. (86) .	4 Wed .	10 25 0	5 Mar (64) .	3 Tues	141 3767	4371
27 Mar. (86) .	5 Thur .	16 37 30	24 Mar (83)	2 Mon	176 0164	4372
27 Mar (86) . .	6 Fri	22 50 0	13 Mar. (72) .	6 Fri	51 6998	4373
27 Mar (87) .	1 Sun	5 2 30	2 Mar (62)	4 Wed	266 0150	4374
27 Mar (86) . .	2 Mon.	11 15 0	21 Mar (80)	3 Tues .	300 6546	4375
27 Mar (86) . .	3 Tues	17 27 30	10 Mar (69)	0 Sat	176 3380	4376
27 Mar (86) . .	4 Wed	23 40 0	27 Feb (58)	4 Wed .	52 0213	4377
27 Mar (87) .	6 Fri .	5 52 30	17 Mar (77)	3 Tues	86 6609	4378
27 Mar (86) . .	0 Sat .	12 5 0	7 Mar (66)	1 Sun	300 9762	4379
27 Mar (86) . .	1 Sun .	18 17 30	25 Mar (84)	6 Fri	9996 9840*	4380
28 Mar (87) . .	3 Tues. .	0 30 0	15 Mar (74) .	4 Wed	211 2992	4381
27 Mar (87) .	4 Wed	6 42 30	3 Mar (63)	1 Sun	86 9826	4382
27 Mar (86) .	5 Thur. .	12 55 0	22 Mar (81)	0 Sat .	121 6222	4383
27 Mar. (86) .	6 Fri. .	19 7 30	11 Mar (70)	4 Wed	9997 3056*	4384
28 Mar. (87) . .	1 Sun .	1 20 0	1 Mar (60) .	2 Mon	211 6209	4385
27 Mar (87) . .	2 Mon. .	7 32 30	19 Mar (79) .	1 Sun .	246 2605	4386
27 Mar (86) . .	3 Tues .	13 45 0	8 Mar (67) .	5 Thur. .	121 9439	4387
27 Mar. (86) . .	4 Wed. .	19 57 30	27 Mar (86) .	4 Wed. .	156 5834	4388
28 Mar. (87) . .	6 Fri .	2 10 0	16 Mar (75) .	1 Sun.	32 2669	4389
27 Mar. (87) . .	0 Sat .	8 22 30	5 Mar (65) .	6 Fri .	246 5821	4390
27 Mar. (86) . .	1 Sun .	14 35 0	24 Mar (83)	5 Thur	281 2218	4391
27 Mar. (86) . .	2 Mon .	20 47 30	13 Mar (72) .	2 Mon.	156 9051	4392
28 Mar (87) .	4 Wed. .	3 0 0	2 Mar (61) .	6 Fri .	32 5885	4303
27 Mar (87) . .	5 Thur. .	9 12 30	20 Mar (80) .	5 Thur. .	67 2281	4394
27 Mar (86) . .	6 Fri. .	15 25 0	10 Mar (69) .	3 Tues .	281 5434	4395

* As a mean tithi Chaitra Śukla 1 was expunged.   The civil day corresponding to it, *i e*, the first day of the luni solar year was as given in cols. 19, 20.

						CONCURRENT YEAR		
						JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4396	1217	1352	701	469-70	1294 95	28 Jaya	33 Vikārın	2 Vaiśākha
4397	1218	1353	702	470 71	1295-96	29 Manmatha	34 Śārvarın	
4398	1219	1354	703	471 72	*1296 97	30 Durmukha	35 Plava	10 Pausha
4399	1220	1355	704	472-73	1297-98	31 Hēmalamba	36 Subhakrıt	
4400	1221	1356	705	473 74	1298 99	32 Vılamba	37 Sōbhana	7 Āśvina
4401	1222	1357	706	474 75	1299 00	33 Vıkārın	38 Krōdhın	
4402	1223	1358	707	475-76	*1300 01	34 Śārvarın	39 Vıśvāvasu	
4403	1224	1359	708	476 77	1301-02	35 Plava	40 Parābhava	
4404	1225	1360	709	477-78	1302 03	36 Subhakrıt	41 Plavanga	3 Jyēshtha
4405	1226	1361	710	478 79	1303 04	37 Sōbhana	42 Kīlaka	
4406	1227	1362	711	479 80	*1304 05	38 Krōdhın	43 Saumya	12 Phālguna
4407	1228	1363	712	480 81	1305 06	39 Vıśvāvasu	44 Sādhārana	
4408	1229	1364	713	481 82	1306 07	40 Parābhava	45 Vırōdhakrıt	
4409	1230	1365	714	482 83	1307-08	41 Plavanga	46 Parıdhāvın	8 Kārttıka
4410	1231	1366	715	483 84	*1308 09	42 Kīlaka	47 Pramādın	
4411	1232	1367	716	484 85	1309-10	43 Saumya	48 Ānanda	
4412	1233	1368	717	485 86	1310 11	44 Sādhārana	49 Rākshasa	5 Śrāvana
4413	1234	1369	718	486 87	1311-12	45 Vırōdhakrıt	50 Anala	
4414	1235	1370	719	487 88	*1312 13	46 Parıdhāvın	51 Pıngala	
4415	1236	1371	720	488 89	1313 14	47 Pramādın	52 Kālayukta	1 Chaıtra
4416	1237	1372	721	489 90	1314 15	48 Ānanda	53 Sıddhārthın	
4417	1238	1373	722	490 91	1315 16	49 Rākshasa	54 Raudra	10 Pausha
4418	1239	1374	723	491 92	*1316-17	50 Anala	55 Durmatı	
4419	1240	1375	724	492 93	1317 18	51 Pıngala	56 Dunilubhı	
4420	1241	1376	725	493 94	1318-19	52 Kālayukta	57 Rudhırōdgārın	7 Āśvina

LXXVI—*Contd*

1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			Kali year
Day and month, A.D	Week-day	Time of mean Mesha-samkrānti	Day and month, A.D	Week-day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M. S				
27 Mar (86)	0 Sat	21 37 40	27 Feb (58)	0 Sat	157 2208	4396
28 Mar. (87)	2 Mon	3 50 0	18 Mar (77)	6 Fri.	191·8664	4397
27 Mar (87)	3 Tues	10 2 30	6 Mar (66)	3 Tues	67·5498	4398
27 Mar (86)	4 Wed.	16 15 0	25 Mar (84)	2 Mon	102 1894	4399
27 Mar (86)	5 Thur	22 27 30	15 Mar (74)	0 Sat	316 5047	4400
28 Mar (87)	0 Sat	4 40 0	4 Mar (63)	4 Wed	192 1881	4401
27 Mar (87)	1 Sun	10 52 30	22 Mar (82)	3 Tues	226·8277	4402
27 Mar (86)	2 Mon	17 5 0	11 Mar (70)	0 Sat	102 5111	4403
27 Mar (86)	3 Tues.	23 17 30	1 Mar (60)	5 Thur	316 8264	4404
28 Mar. (87)	5 Thur	5 30 0	19 Mar (78)	3 Tues	12 8341	4405
27 Mar. (87)	6 Fri	11 42 30	8 Mar. (68)	1 Sun	227 1494	4406
27 Mar (86)	0 Sat	17 55 0	27 Mar. (86)	0 Sat	261 7889	4407
28 Mar (87)	2 Mon	0 7 30	16 Mar (75)	4 Wed	137 4728	4408
28 Mar. (87)	3 Tues	6 20 0	5 Mar (64)	1 Sun	13·1558	4409
27 Mar (87)	4 Wed.	12 32 30	23 Mar (93)	0 Sat	47 7954	4410
27 Mar (86)	5 Thur	18 45 0	13 Mar (72)	5 Thur.	262 1106	4411
28 Mar. (87)	0 Sat	0 57 30	2 Mar (61)	2 Mon	137 7040	4412
28 Mar (87)	1 Sun	7 10 0	21 Mar (80)	1 Sun	172 4337	4413
27 Mar (87)	2 Mon	13 22 30	9 Mar (69)	5 Thur.	48 1170	4414
27 Mar (86)	3 Tues	19 35 0	27 Feb (58)	3 Tues	262 4322	4415
28 Mar (87)	5 Thur	1 47 30	18 Mar (77)	2 Mon	297 0719	4416
28 Mar (87)	6 Fri	8 0 0	7 Mar (66)	6 Fri	172 7553	4417
27 Mar (87)	0 Sat	14 12 30	25 Mar (85)	5 Thur	207 3949	4418
27 Mar (86)	1 Sun	20 25 0	14 Mar (73)	2 Mon	83 0782	4419
28 Mar (87)	3 Tues	2 37 30	4 Mar (63)	0 Sat	297·3935	4420

TABLE

						JOVIAN SAMVATSARA.		Mean Intercalated (adhika) lunar month
Kali.	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam.	A D.	Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
4421	1242	1377	726	494 95	1319 20	53 Siddhārthin	58 Raktāksha	.
4422	1243	1378	727	495 96	*1320 21	54 Raudra	59 Krōdhana	..
4423	1244	1379	728	496 97	1321-22	55 Durmati	60 Kshaya	3 Jyēshṭha
4424	1245	1380	729	497-98	1322-23	56 Dundubhi	1 Prabhava	
4425	1246	1381	730	498 99	1323-24	57 Rudhirōdgārin	2 Vibhava	12 Phālguna
4426	1247	1382	731	499 00	*1324-25	58 Raktāksha	3 Sukla	.
4427	1248	1383	732	500 01	1325 26	59 Krōdhana	4 Pramōda	.
4428	1249	1384	733	501 02	1326 27	60 Kshaya	5 Prajāpati	8 Kārttika
4429	1250	1385	734	502 03	1327-28	1 Prabhava	6 Angiras	...
4430	1251	1386	735	503 04	*1328 29	2 Vibhava	7 Srīmukha	.
4431	1252	1387	736	504 05	1329-30	3 Sukla	8 Bhāva	5 Srāvana
4432	1253	1388	737	595 06	1330 31	4 Pramōda	9 Yuvan†	..
4433	1254	1389	738	506 07	1331-32	5 Prajāpati	11 Īśvara	.
4434	1255	1390	739	507 08	*1332-33	6 Angiras	12 Bahudhānya	1 Chaitra
4435	1256	1391	740	508 09	1333 34	7 Srīmukha	13 Pramāthin	.
4436	1257	1392	741	509 10	1334 35	8 Bhāva	14 Vikrama	10 Pausha
4437	1258	1393	742	510-11	1335-36	9 Yuvan	15 Vrisha	
4438	1259	1394	743	511-12	*1336 37	10 Dhātri	16 Chitrabhānu	
4439	1260	1395	744	512-13	1337-38	11 Īśvara	17 Subhānu	6 Bhādrapada
4440	1261	1396	745	513 14	1338 39	12 Bahudhānya	18 Tāraṇa	...
4441	1262	1397	746	514-15	1339-40	13 Pramāthin	19 Pārthiva	.
4442	1263	1398	747	515-16	*1340-41	14 Vikrama	20 Vyaya	3 Jyēshṭha
4443	1264	1399	748	516 17	1341 42	15 Vrisha	21 Sarvajit	..
4444	1265	1400	749	517-18	1342 43	16 Chitrabhānu	22 Sarvadhārin	11 Māgha
4445	1266	1401	750	518 19	1343-44	17 Subhānu	23 Virōdhin	...

† 10 Dhātri was suppressed in the north by the mean system, but 11 Īśvara by the true system. The year A.D. 1331-32 was by the latter system called " 10 Dhātri" in the north.

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COMMENCEMENT OF THE						Kali year.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D	Week day	Time of mean Mēsha-samkrānti	Day and month, A D	Week day	*a* (here=*t*, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
28 Mar (87)	4 Wed	8 50 0	23 Mar (82)	6 Fri.	332 0331	4421
27 Mar (87) .	5 Thur	15 2 30	11 Mar (71)	3 Tues	207·7165	4422
27 Mar. (86)	6 Fri	21 15 0	28 Feb (59)	0 Sat .	83 3999	4423
28 Mar (87) . .	1 Sun	3 27 30	19 Mar (78)	6 Fri	118 0395	4424
28 Mar (87)	2 Mon.	9 40 0	9 Mar (68)	4 Wed	332·3547	4425
27 Mar (87)	3 Tues	15 52 30	26 Mar (86) .	2 Mon	28 3624	4426
27 Mar (86)	4 Wed	22 5 0	16 Mar (75) .	0 Sat	242 6778	4427
28 Mar (87)	6 Fri	4 17 30	5 Mar (64)	4 Wed	118·3612	4428
28 Mar (87)	0 Sat	10 30 0	24 Mar (83) .	3 Tues	153 0008	4429
27 Mar (87) .	1 Sun .	16 42 30	12 Mar (72) .	0 Sat. .	28 7841	4430
27 Mar (86) .	2 Mon	22 55 0	2 Mar (61)	5 Thur	242 9995	4431
28 Mar (87) .	4 Wed	5 7 30	21 Mar (80) .	4 Wed	277 6391	4432
28 Mar (87) . .	5 Thur	11 20 0	10 Mar (69) .	1 Sun	153 3224	4433
27 Mar (87) . .	6 Fri .	17 32 30	27 Feb (58) .	5 Thur	29 0058	4434
27 Mar (86)	0 Sat	23 45 0	17 Mar (76) .	4 Wed	63·6455	4435
28 Mar (87)	2 Mon	5 57 30	7 Mar (66)	2 Mon .	277 9607	4436
28 Mar (87)	3 Tues .	12 10 0	25 Mar. (85)	1 Sun .	312 6003	4437
27 Mar (87)	4 Wed .	18 22 30	14 Mar. (74)	5 Thur	188 2837	4438
28 Mar (87)	6 Fri	0 35 0	3 Mar (62)	2 Mon .	63 9689	4439
28 Mar (87) . .	0 Sat	6 47 30	22 Mar (81)	1 Sun	98 6067	4440
28 Mar (87) .	1 Sun	13 0 0	12 Mar (71) .	6 Fri .	312 9231	4441
27 Mar (87) .	2 Mon .	19 12 30	29 Feb (60) .	3 Tues .	188 6054	4442
28 Mar (87)	4 Wed	1 25 0	19 Mar (78) .	2 Mon	223·2350	4443
28 Mar (87)	5 Thur. .	7 37 30	8 Mar. (67) .	6 Fri	98 9284	4444
28 Mar (87) .	6 Fri .	13 50 0	27 Mar. (86) .	5 Thur .	133 5679	4445

TABLE

	CONCURRENT YEAR							
						JOVIAN SAMVATSARA.		Mean Intercalated (adhika) lunar month.
Kalı	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4446	1267	1402	751	519 20	*1344 45	18 Tārana	24 Vikrita	8 Kārttika
4447	1268	1403	752	520 21	1345 46	19 Pārthiva	25 Khara	
4448	1269	1404	753	521 22	1346 47	20 Vyaya	26 Nandana	
4449	1270	1405	754	522 23	1347 48	21 Sarvajıt	27 Vijaya	
4450	1271	1406	755	523 24	*1348 49	22 Sarvadhārın	28 Jaya	4 Āshādha
4451	1272	1407	756	524 25	1349 50	23 Virōdhın	29 Manmatha	
4452	1273	1408	757	525 26	1350 51	24 Vikrıta	30 Durmukha	
4453	1274	1409	758	526-27	1351-52	25 Khara	31 Hēmalamba	1 Chaitra
4454	1275	1410	759	527 28	*1352 53	26 Nandana	32 Vilamba	
4455	1276	1411	760	528 29	1353 54	27 Vijaya	33 Vikārın	9 Mārgaśıra
4456	1277	1412	761	529 30	1354 55	28 Jaya	34 Sārvarın	
4457	1278	1413	762	530 31	1355 56	29 Manmatha	35 Plava	
4458	1279	1414	763	531 32	*1356 57	30 Durmukha	36 Śubhakrıt	6 Bhādrapada
4459	1280	1415	764	532 33	1357 58	31 Hēmalamba	37 Śōbhana	
4460	1281	1416	765	533 34	1358 59	32 Vilamba	38 Krōdhın	
4461	1282	1417	766	534 35	1359 60	33 Vıkārın	39 Viśvāvasu	3 Jyēshtha
4462	1283	1418	767	535 36	*1360 61	34 Sārvarın	40 Parābhava	
4463	1284	1419	768	536 37	1361 62	35 Plava	41 Plavanga	11 Māgha
4464	1285	1420	769	537 38	1362 63	36 Śubhakrıt	42 Kīlaka	
4465	1286	1421	770	538 39	1363 64	37 Śōbhana	43 Saumya	
4466	1287	1422	771	539 40	*1364 65	38 Krōdhın	44 Sādhārana	8 Kārttika
4467	1288	1423	772	540 41	1365 66	39 Viśvāvasu	45 Vırōdhakrıt	
4468	1289	1424	773	541 42	1366 67	40 Parābhava	46 Parıdhāvın	
4469	1290	1425	774	542 43	1367 68	41 Plavanga	47 Pramādın	4 Āshādha
4470	1291	1426	775	543 44	*1368 69	42 Kīlaka	48 Ānanda	

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali year
Day and month, A D	Week day	Time of mean Mesha-samkrānti.	Day and month, A D	Week day	*a* (here=*t*, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
27 Mar (87)	0 Sat .	20 2 30	15 Mar (75)	2 Mon	9 2513	4446
28 Mar (87)	2 Mon .	2 15 0	5 Mar (64)	0 Sat	223 5666	4447
28 Mar (87)	3 Tues .	8 27 30	24 Mar (83)	6 Fri	258 2062	4448
28 Mar (87)	4 Wed	14 40 0	13 Mar (72)	3 Tues	133 8897	4449
27 Mar (87)	5 Thur	20 52 30	1 Mar (61)	0 Sat	9 5730	4450
28 Mar (87) .	0 Sat	3 5 0	20 Mar (79) .	6 Fri	44 2126	4451
28 Mar (87)	1 Sun	9 17 30	10 Mar (69)	4 Wed	258 5279	4452
28 Mar (87)	2 Mon	15 30 0	27 Feb (58)	1 Sun	134 2112	4453
27 Mar (87)	3 Tues	21 42 30	17 Mar (77) .	0 Sat	168 8509	4454
28 Mar (87)	5 Thur	3 55 0	6 Mar (65)	4 Wed	44 5342	4455
28 Mar (87)	6 Fri	10 7 30	25 Mar (84)	3 Tues	79 1738	4456
28 Mar (87)	0 Sat	16 20 0	15 Mar (74)	1 Sun	293 4891	4457
27 Mar (87)	1 Sun	22 32 30	3 Mar (63)	5 Thur	169 1725	4458
28 Mar (87)	3 Tues	4 45 0	22 Mar (81)	4 Wed	203 8121	4459
28 Mar (87)	4 Wed	10 57 30	11 Mar (70)	1 Sun	79 4955	4460
28 Mar (87)	5 Thur	17 10 0	1 Mar (60)	6 Fri	293 8108	4461
27 Mar (87)	6 Fri	23 22 30	19 Mar (79)	5 Thur	328 4501	4462
28 Mar (87) .	1 Sun	5 35 0	8 Mar (67)	2 Mon	204 1338	4463
28 Mar (87)	2 Mon	11 47 30	27 Mar (86) .	1 Sun	238 7731	4464
28 Mar (87) .	3 Tues	18 0 0	16 Mar (75) .	5 Thur	114 4508	4465
28 Mar (88) .	5 Thur .	0 12 30	5 Mar (65)	3 Tues	328 7721	4466
28 Mar (87) .	6 Fri	6 25 0	23 Mar (82)	1 Sun	24 7798	4467
28 Mar (87)	0 Sat	12 37 30	13 Mar (72)	6 Fri	239 0951	4468
28 Mar (87)	1 Sun	18 50 0	2 Mar (61)	3 Tues	114 7785	4469
28 Mar (88)	3 Tues	1 2 30	20 Mar (80)	2 Mon .	148 4181	4470

TABLE

							JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
Kalı	Śaka	Chaitrādi Vikrama	Mēshādı solar year in Bengal	Kollam	A D		Southern system	Northern system	
1	2	3	3a	4	5		6	7	8a
4471	1292	1427	776	544 45	1369-70		43 Saumya	49 Rākshasa	...
4472	1293	1428	777	545-46	1370 71		44 Sādhārana	50 Anala	1 Chaitra
4473	1204	1420	778	546 47	1371-72		45 Virōdhakrıt	51 Pıngala	
4474	1295	1430	779	547 48	*1372 73		46 Parıdhāvın	52 Kālayukta	9 Mārgaśıra
4175	1296	1431	780	548 49	1373 74		47 Pramādın	53 Sıddhārthın	
4476	1297	1432	781	549 50	1374 75		48 Ānanda	54 Raudra	
4477	1298	1433	782	550 51	1375 76		49 Rākshasa	55 Durmatı	6 Bhādrapada
4478	1299	1434	783	551 52	*1376 77		50 Anala	56 Dundubhı	
4479	1300	1435	784	552 53	1377 78		51 Pıngala	57 Rudhırōdgārın	
4480	1301	1436	785	553 54	1378 79		52 Kālayukta	58 Raktāksha	2 Vaısākha
4481	1302	1437	786	554 55	1379 80		53 Sıddhārthın	59 Krōdhana	
4482	1303	1438	787	555 56	*1380 81		54 Raudra	60 Kshaya	11 Māgha
4483	1304	1439	788	556 57	1381 82		55 Durmatı	1 Prabhava	
4484	1305	1440	789	557 58	1382-83		56 Dundubhı	2 Vıbhava	
4485	1306	1441	790	558 59	1383 84		57 Rudhırōdgārın	3 Śukla	7 Āśvına
4486	1307	1442	791	559 60	*1384 85		58 Raktāksha	4 Pramōda	
4487	1308	1443	792	560 61	1385 86		59 Krōdhana	5 Prajāpatı	
4488	1309	1444	793	561 62	1386 87		60 Kshaya	6 Angıras	4 Āshādha
4489	1310	1445	794	562 63	1387 86		1 Prabhava	7 Śrımukha	
4490	1311	1446	795	563 64	*1388 89		2 Vıbhava	8 Bhāva	12 Phālguna
4491	1312	1447	796	564 65	1389 90		3 Śukla	9 Yuvan	
4492	1313	1448	707	565 66	1390 91		4 Pramōda	10 Dhātrı	
4493	1314	1440	798	566 67	1391 92		5 Prajāpatı	11 Īśvara	9 Mārgaśıra
4494	1315	1450	709	567 68	*1392 93		6 Angıras	12 Bahudhānya	
4495	1316	1451	800	568 69	1393 94		7 Śrımukha	13 Pramāthın	...

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1 Ārya Siddhānta, mean system.

COMMENCEMENT OF THE						Kali year
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti	Day and month, A D	Week day	a (here$=t$, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
28 Mar (87) .	4 Wed	7 15 0	9 Mar (68)	6 Fri	25 1015	4471
28 Mar (87) . .	5 Thur.	13 27 30	27 Feb (58)	4 Wed	239 4167	4472
28 Mar (87) .	6 Fri	19 40 0	18 Mar (77)	3 Tues	274 0564	4473
28 Mar (88)	1 Sun .	1 52 30	6 Mar (66)	0 Sat .	149 7397	4474
28 Mar (87) .	2 Mon	8 5 0	25 Mar (84)	6 Fri	184 3794	4475
28 Mar. (87) .	3 Tues	14 17 30	14 Mar (73)	3 Tues	60 0627	4476
28 Mar (87) .	4 Wed	20 30 0	4 Mar (63)	1 Sun	274 3779	4477
28 Mar (88) . .	6 Fri	2 42 30	22 Mar (82)	0 Sat	309 0176	4478
28 Mar (87)	0 Sat	8 55 0	11 Mar (70)	4 Wed	184 7009	4479
28 Mar (87) .	1 Sun	15 7 30	28 Feb (59)	1 Sun	60 3844	4480
28 Mar (87)	2 Mon .	21 20 0	19 Mar (78)	0 Sat	95 0230	4481
28 Mar (88) .	4 Wed .	3 32 30	8 Mar (68)	5 Thur	309 3392	4482
28 Mar (87)	5 Thur	9 45 0	26 Mar (85)	3 Tues	5 3469	4483
28 Mar (87) .	6 Fri	15 57 30	16 Mar (75)	1 Sun.	219 6622	4484
28 Mar (87)	0 Sat	22 10 0	5 Mar (64)	5 Thur	95 3456	4485
28 Mar (88) .	2 Mon	4 22 30	23 Mar (83)	4 Wed	129 9852	4486
28 Mar (87)	3 Tues .	10 35 0	12 Mar (71)	1 Sun	5 6686	4487
28 Mar (87)	4 Wed	16 47 30	2 Mar (61)	6 Fri	219 9839	4488
28 Mar (87) .	5 Thur	23 0 0	21 Mar (80)	5 Thur	254 6235	4489
28 Mar (88) .	0 Sat	5 12 30	9 Mar (69)	2 Mon	130 3069	4490
28 Mar (87)	1 Sun	11 25 0	28 Mar (87)	1 Sun	164 9464	4491
28 Mar (87)	2 Mon	17 37 30	17 Mar (76)	5 Thur	40 6298	4492
28 Mar. (87) .	3 Tues	23 50 0	7 Mar (66)	3 Tues	254 9151	4493
28 Mar (88)	5 Thur	6 2 30	25 Mar (85)	2 Mon	289 5548	4494
28 Mar (87)	6 Fri	12 15 0	14 Mar (73)	6 Fri	165 2681	4495

TABLE

CONCURRENT YEAR								Mean Intercalated (adhika) lunar month
Kali.	Śaka	Chaitrādi Vikrama.	Meshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4496	1317	1452	801	569-70	1394-95	8 Bhāva	14 Vikrama	6 Bhādrapada
4497	1318	1453	802	570-71	1395-96	9 Yuvan	15 Vrisha	
4498	1319	1454	803	571-72	*1396-97	10 Dhātri	16 Chitrabhanu	
4499	1320	1455	804	572-73	1397-98	11 Īsvara	17 Subbānu	2 Vaisākha
4500	1321	1456	805	573-74	1398-99	12 Bahudhanya	18 Tārana	
4501	1322	1457	806	574-75	1399-00	13 Pramāthin	19 Pārthiva	11 Māgha
4502	1323	1458	807	575-76	*1400-01	14 Vikrama	20 Vyaya	

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COMMENCEMENT OF THE						Kali year
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and month, A D	Week day	Time of mean Mesha samkrānti	Day and month, A.D	Week day	*a* (here=*t*, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
28 Mar (87)	0 Sat	18 27 30	3 Mar (82)	3 Tues	40 9515	4496
29 Mar (88)	2 Mon	0 40 0	22 Mar (81)	2 Mon	75 5912	4497
28 Mar (88)	3 Tues	6 52 30	11 Mar (71)	0 Sat	289 9064	4498
28 Mar (87)	4 Wed	13 5 0	28 Feb (59)	4 Wed	165 5898	4499
28 Mar (87)	5 Thur	19 17 30	19 Mar (78)	3 Tues	200 2294	4500
29 Mar (88)	0 Sat	1 30 0	8 Mar (67)	0 Sat	75 9127	4501
28 Mar (88)	1 Sun	7 42 30	26 Mar (86)	6 Fri	110 5523	4502

TABLE LXXVII

DURATION AND COLLECTIVE DURATION OF MEAN SOLAR MONTHS ACCORDING TO THE FIRST ARYA
SIDDHĀNTA, WITH INCREASE OF a AT EACH SAMKRĀNTI

Mean luni solar month, ending after the second of the two solar samkrāntis connected with it	At the mean solar samkrāntis.	Collective duration in time and collective increase of a from mean Mēsha samkrānti to the several samkrāntis.					
		Day	Week-day	H	M	S	a
1	2	3					4
1 Chaitra .	Mīna samk (of previous year)						
2 Vaisākha . .	Mēsha-samk. .	0	0	0	0	0	0
3. Jyēshṭha .	Vrishabha-samk	30	(2)	10	31	2½	307 3526
4. Āshāḍha . .	Mithuna-samk. .	60	(4)	21	2	5	614 7052
5 Srāvaṇa . .	Karka-samk .	91	(0)	7	33	7½	922 0579
6 Bhādrapada	Simha-samk. .	121	(2)	18	4	10	1229 4105
7 Āśvina .	Kanyā samk .	152	(5)	4	35	12½	1536 7631
8 Kārttika .	Tulā-samk .	182	(0)	15	6	15	1844 1157
9 Mārgásira	Vrischika-samk .	213	(3)	1	37	17½	2151 4684
10 Pausha .	Dhanus samk. .	243	(5)	12	8	20	2458 8210
11 Māgha .	Makara-samk	273	(0)	22	39	22½	2766 1736
12. Phālguna .	Kumbha-samk.	304	(3)	9	10	25	3073 5262
1 Chaitra (of following year)	Mīna-samk	334	(5)	19	41	27½	3380 8789
	Mēsha samk (of following year)	365	(1)	6	12	30	3688.2315*

The duration of each mean solar month is 30d 10h 31m 2½s; and during this period in addition to one whole revolution, the mean moon increases her distance from mean sun, in measurement by 10,000ths of circle by, (or in other words the monthly increase of a =) 307 352623 726.

* More fully 3688 231484714.

TABLE LXXVIII

VALUE OF a ($= t$) AT BEGINNING OF CENTURIES OF THE KALIYUGA, ACCORDING TO THE FIRST ARYA SIDDHANTA MEAN SYSTEM

[The value of a to be added for beginning of odd years of centuries is given in Table LXXIII above   W. D = Week-day]

Century K Y	W -D	a (= t)
36	1	7715 3525
37	1	6583 1816
38	0	5112 3787
39	0	3980 2078
40	0	2848 0369
41	0	1715 8659
42	0	583 6950
43	0	9451 5240
44	0	8319 3531
45	0	7187 1822
46	6	5716 3793
47	6	4584 2084
48	6	3452 0375

The duration of each mean solar month is 30d 10h 31m 2½s, and during this period in addition to one whole revolution, the mean moon increases her distance from mean sun, in measurement by 10,000ths of circle by, (or in other words the monthly increase of $a=$) 307 352623726

N B —These values of a agree generally with Professor Jacobi's values above (Vol XI, p 164) The apparent differences are due to two causes. (i) The present estimate of the sum of the greatest equations of moon and sun is about 0 4 greater than that of Professor Jacobi (ii) The values here stated for the beginnings of centuries 38 to 42 are for mean sunrise on Saturdays, while his are for mean sunrise on the following Sundays

TABLE LXXIX.

MEAN SUNRISE VALUES OF a (DISTANCE OF MEAN MOON FROM MEAN SUN), IN 10,000THS OF CIRCLE, FOR A MONTH PREVIOUS TO THE DAY OF MEAN MESHA-SAMKRANTI.

Interval of days from mean Mesha-samkranti day	W -D	a (mean sunrise value)	Interval of days from mean Mesha-samkranti day.	W -D	a (mean sunrise value).
31	4	9502 4119	15	6	4920 5219
30	5	9841 0438	14	0	5259 1538
29	6	179 6756	13	1	5597 7856
28	0	518 3075	12	2	5936 4175
27	1	856 9394	11	3	6275 0494
26	2	1195 5713	10	4	6613 6813
25	3	1534 2032	9	5	6952 3131
24	4	1872 8350	8	6	7290 9450
23	5	2211 4669	7	0	7629 5769
22	6	2550 0988	6	1	7968 2088
21	0	2888 7306	5	2	8306 8406
20	1	3227 3625	4	3	8645 4725
19	2	3565 9944	3	4	8984 1044
18	3	3904 6263	2	5	9322 7263
17	4	4243 2581	1	6	9661 3681
16	5	4581 8900	0	0	0

N B —The use of this Table is explained in example 1.

TABLE LXXX

The Sun's mean longitude during the Hindu solar year, in 10,000ths of circle, according to the First Ārya Siddhānta, at periods of 24 hours each, measured from the moment of mean Mesha-samkrānti

The same in degrees, etc., can be calculated by Table XLIV, Vol XIV above

24 hour period	Sun's mean longitude	24-hour period	Sun's mean longitude	24 hour period	Sun's mean longitude	24 hour period	Sun's mean longitude
1	2	1	2	1	2	1	2
At moment of mean Mesha samkrānti	0	42	1149 8700	87	2381 8736	127	3476 9879
		43	1177 2479	88	2409 2514	128	3504 3657
		44	1204 5257	89	2436 6293	129	3531 7436
		45	1232 0036	90	2464 0071	130	3559 1214
1	27 3779	46	1259 3814	91	2491 3850	131	3586 4993
2	54 7557	47	1286 7593	At moment of mean Karka samkrānti	2500 0	132	3613 8772
3	82 1336	48	1314 1371			133	3641 2550
4	109 5114	49	1341 5150			134	3668 6329
5	136 8893	50	1368 8929	92	2518 7629	135	3696 0107
6	164 2671	51	1396 2707	93	2546 1407	136	3723 3886
7	191 6450	52	1423 6186	94	2573 5186	137	3750 7664
8	219 0229	53	1451 0264	95	2600 8964	138	3778 1443
9	246 4007	54	1478 4043	96	2628 2743	139	3805 5222
10	273 7786	55	1505 7821	97	2655 6521	140	3832 9000
11	301 1564	56	1533 1600	98	2683 0300	141	3860 2779
12	328 5343	57	1560 5379	99	2710 4079	142	3887 6557
13	355 9121	58	1587 9157	100	2737 7857	143	3915 0336
14	383 2900	59	1615 2936	101	2765 1636	144	3942 4114
15	410 6679	60	1642 6714	102	2792 5414	145	3969 7893
16	438 0457	At moment of mean Mithuna samkrānti	1666 6	103	2819 9193	146	3997 1672
17	465 4236			104	2847 2971	147	4024 5450
18	492 8014			105	2874 6750	148	4051 9229
19	520 1793			106	2902 0529	149	4079 3007
20	547 5571	61	1670 0493	107	2929 4307	150	4106 6786
21	574 9350	62	1697 4271	108	2956 8086	151	4134 0564
22	602 3129	63	1724 8050	109	2984 1864	152	4161 4343
23	629 6907	64	1752 1829	110	3011 5643	At moment of mean Kanyā samkrānti	4166 6
24	657 0686	65	1779 5607	111	3038 9421		
25	684 4464	66	1806 9386	112	3066 3200		
26	711 8243	67	1834 3164	113	3093 6979	153	4188 8122
27	739 2021	68	1861 6943	114	3121 0757	154	4216 1900
28	766 5800	69	1889 0721	115	3148 4536	155	4243 5679
29	793 9579	70	1916 4500	116	3175 8314	156	4270 9457
30	821 3357	71	1943 8279	117	3203 2093	157	4298 3236
At moment of mean Vrishabha samkrānti	833 3	72	1971 2057	118	3230 5872	158	4325 7014
		73	1998 5836	119	3257 9650	159	4353 0793
		74	2025 9614	120	3285 3429	160	4380 4572
31	848 7136	75	2053 3393	121	3312 7207	161	4407 8350
32	876 0914	76	2080 7171	At moment of mean Simha samkrānti	3333 3	162	4435 2129
33	903 4693	77	2108 0950			163	4462 5907
34	930 8471	78	2135 4729			164	4489 9686
35	958 2250	79	2162 8507	122	3340 0986	165	4517 3464
36	985 6029	80	2190 2286	123	3367 4764	166	4544 7243
37	1012 9807	81	2217 6064	124	3394 8543	167	4572 1022
38	1040 3586	82	2244 9843	125	3422 2322	168	4599 4800
39	1067 7364	83	2272 3621	126	3449 6100	169	4626 8579
40	1095 1143	84	2299 7400			170	4654 2357
41	1122 4921	85	2327 1179			171	4681 6136
		86	2354 4957				

TABLE LXXX—Contd

24 hour period	Sun's mean longitude	24 hour period	Sun's mean longitude	24 hour period	Sun's mean longitude	24 hour period	Sun's mean longitude
1	2	1	2	1	2	1	2
172	1708 9914	220	6023 1286	272	7446 7772	320	8760 9143
173	1736 3693	221	6050 5064	273	7474 1550	321	8788 2922
174	1763 7172	222	6077 8843	At moment of mean Makara samkrānti	7500 0	322	8815 6700
175	1791 1250	223	6105 2622			323	8843 0479
176	1818 5029	224	6132 6400	274	7501 5329	324	8870 4257
177	1845 8807	225	6160 0179	275	7528 9107	325	8897 8036
178	1873 2586	226	6187 3957	276	7556 2886	326	8925 1814
179	1900 6364	227	6214 7736	277	7583 6664	327	8952 5593
180	1928 0143	228	6242 1514	278	7611 0443	328	8979 9372
181	1955 3922	229	6269 0593	279	7638 4222	329	9007 3150
182	1982 7700	230	6296 9072	280	7665 8000	330	9034 6929
At moment of mean Tulā samkrānti	5000 0	231	6324 2850	281	7693 1779	331	9062 0707
		232	6351 6629	282	7720 5557	332	9089 4486
183	5010 1479	233	6379 0407	283	7747 9336	333	9116 8264
184	5037 5257	234	6406 4166	284	7775 3114	334	9144 2043
185	5064 9036	235	6433 7964	285	7802 6893	At moment of mean Mina-samkrānti	9166 6
186	5092 2814	236	6461 1743	286	7830 0672		
187	5119 6593	237	6488 5522	287	7857 4450	335	9171 5822
188	5147 0372	238	6515 9300	288	7884 8229	336	9198 9600
189	5174 4150	239	6543 3079	289	7912 2007	337	9226 3379
190	5201 7929	240	6570 6857	290	7939 5786	338	9253 7157
191	5229 1707	241	6598 0636	291	7966 9564	339	9281 0936
192	5256 5486	242	6625 4411	292	7994 3343	340	9308 4715
193	5283 9264	243	6652 8193	293	8021 7122	341	9335 8493
194	5311 3043	At moment of mean Dhanus samkrānti	6666 6	294	8049 0900	342	9363 2272
195	5338 6822			295	8076 4679	343	9390 6050
196	5366 0600	244	6680 1972	296	8103 8457	344	9417 9829
197	5393 4379	245	6707 5750	297	8131 2236	345	9445 3607
198	5420 8157	246	6734 9529	298	8158 6014	346	9472 7386
199	5448 1936	247	6762 3307	299	8185 9793	347	9500 1165
200	5475 5714	248	6789 7086	300	8213 3572	348	9527 4943
201	5502 9493	249	6817 0864	301	8240 7350	349	9554 8722
202	5530 3272	250	6844 4643	302	8268 1129	350	9582 2500
203	5557 7050	251	6871 8422	303	8295 4907	351	9609 6279
204	5585 0829	252	6899 2200	304	8322 8686	352	9637 0057
205	5612 4607	253	6926 5979	At moment of mean Kumbha samkrānti	8333 3	353	9664 3836
206	5639 8386	254	6953 9757			354	9691 7615
207	5667 2164	255	6981 3536	305	8350 2464	355	9719 1393
208	5694 5943	256	7008 7314	306	8377 6243	356	9746 5172
209	5721 9722	257	7036 1093	307	8405 0022	357	9773 8950
210	5749 3500	258	7063 4872	308	8432 3800	358	9801 2729
211	5776 7279	259	7090 8650	309	8459 7579	359	9828 6507
212	5804 1057	260	7118 2429	310	8487 1357	360	9856 0286
213	5831 4836	261	7145 6207	311	8514 5136	361	9883 4065
At moment of mean Vrischika samkrānti	5833 3	262	7172 9986	312	8541 8914	362	9910 7843
		263	7200 3764	313	8569 2693	363	9938 1622
214	5858 8614	264	7227 7543	314	8596 6472	364	9965 5400
215	5886 2393	265	7255 1322	315	8624 0250	365	9992 9179
216	5913 6172	266	7282 5100	316	8651 4029	At moment of mean Mesha-samkrānti of full ...	10,000 0
217	5940 9950	267	7309 8879	317	8678 7807		
218	5968 3729	268	7337 2657	318	8706 1586		
219	5995 7507	269	7364 6436	319	8723 5364		
		270	7392 0214				
		271	7419 3993				

TABLE LXXXI

SUN'S MEAN LONGITUDE   INCREASE IN FRACTIONS OF DAY ACCORDING TO THE FIRST ARYA SIDDHANTA

(For the same in degrees, etc , see above, Vol XIV, Table XLIV)

INCREASE PER HOUR		INCREASE PER MINUTE				INCREASE PER SECOND			
No	In 10,000ths of circle	No	In 10,000ths of circle	No	In 10,000ths of circle	No	In 10,000ths of circle	No	In 10,000ths of circle
1	1 1407	1	0 0190	31	0 5894	1	0 0003	31	0 0098
2	2 2815	2	0 0380	32	0 6084	2	0 0006	32	0 0101
3	3 4222	3	0 0570	33	0 6274	3	0 0010	33	0 0105
4	4 5630	4	0 0760	34	0 6464	4	0 0013	34	0 0108
5	5 7037	5	0 0951	35	0 6654	5	0 0016	35	0 0111
6	6 8445	6	0 1141	36	0 6844	6	0 0019	36	0 0114
7	7 9852	7	0 1331	37	0 7035	7	0 0022	37	0 0117
8	9 1260	8	0 1521	38	0 7225	8	0 0025	38	0 0120
9	10 2667	9	0 1711	39	0 7415	9	0 0029	39	0 0124
10	11 4074	10	0 1901	40	0 7605	10	0 0032	40	0 0127
11	12 5482	11	0 2091	41	0 7795	11	0 0035	41	0 0130
12	13 6889	12	0 2281	42	0 7985	12	0 0038	42	0 0133
13	14 8297	13	0 2472	43	0 8175	13	0 0041	43	0 0136
14	15 9704	14	0 2662	44	0 8365	14	0 0044	44	0 0139
15	17 1112	15	0 2852	45	0 8556	15	0 0048	45	0 0143
16	18 2519	16	0 3042	46	0 8746	16	0 0051	46	0 0146
17	19 3926	17	0 3232	47	0 8936	17	0 0054	47	0 0149
18	20 5334	18	0 3422	48	0 9126	18	0 0057	48	0 0152
19	21 6741	19	0 3612	49	0 9316	19	0 0060	49	0 0155
20	22 8149	20	0 3802	50	0 9506	20	0 0063	50	0 0158
21	23 9556	21	0 3993	51	0 9696	21	0 0067	51	0 0162
22	25 0964	22	0 4183	52	0 9886	22	0 0070	52	0 0165
23	26 2371	23	0 4373	53	1 0077	23	0 0073	53	0 0168
		24	0 4563	54	1 0267	24	0 0076	54	0 0171
		25	0 4753	55	1 0457	25	0 0079	55	0 0174
		26	0 4943	56	1 0647	26	0 0082	56	0 0177
		27	0 5133	57	1 0837	27	0 0086	57	0 0181
		28	0 5323	58	1 1027	28	0 0089	58	0 0184
		29	0 5514	59	1 1217	29	0 0092	59	0 0187
		30	0 5704			30	0 0095		

No. 7—TWO NEW GRANTS OF DHRUVASENA [I] FROM PALITANA.

By V S SUKTHANKAR, PH D

I edit here two new Valabhi copper-plate grants (one complete and one incomplete) which were presented, in 1918, to the Trustees of the Prince of Wales Museum, Bombay, by the Bhāvnagar Darbar, which is ever ready to further the cause of epigraphic research by placing ungrudgingly the materials, as they are discovered, in the hands of students of Indian history for investigation and publication, and, when possible, by having them exhibited in centrally situated museums   The plates under reference were discovered at the bottom of a small tank outsid the Śatruñjaya Gate at Pālitānā while the tank was being drained during the time of the la Thakor Saheb of that State [1]

A.—PLATES OF DHRUVASENA I.; [VALABHI]-SAM[VAT] 207.

The plates, which are inscribed on one side only, are two in number, each measuring roughly 11¼" broad by 6¾" high. The edges are just slightly raised in order to protect the writing, which (excepting portions of ll 1-4) is in a state of perfect preservation   The plates are of fair thickness, but the letters, being deep, show through on the reverse sides   The engraving is well executed   Each of the plates has two holes bored in it   A ring of copper passing through one pair of them serves to hold the plates together at one end   The seal, which is an invariable accompaniment of such plates, is missing.   The aggregate weight of the plates is about 102 *tolas.* Each plate contains twelve lines of writing, the last line but one of the second plate contains the date

From the foregoing description of the plates, as well as from the facsimiles of them appearing with this article, it will be evident that this record does not differ in any striking particular from any of the hitherto published records of the same king. Only in the portion dealing with the grant proper does the text of this inscription differ, for example, from that of other plates of this king which were discovered some years back also at Pālitānā, and have been edited by Dr. Sten Konow in a former issue of this Journal [2]   The royal donor, Dhruvasēna, as well as the *dataka* Mammaka and the writer Kikkaka, are names well known to the Indian epigraphist.   It will, therefore, be unnecessary to go here into a minute description of the characters and orthography of this inscription.   It will suffice to observe that the alphabet offers a specimen of final *t* (l. 15), final *m* (l. 23) and the numerical ideograms 200, 7, and 5, and that the name of the founder of the dynasty is spelt as *Bhatakka* (l 3)   At the end of line 12 is to be found a horizontal stroke, about ¼" long, evidently drawn with a view to fill up the empty space remaining at the end.   The reason for leaving the space vacant appears to be that the writer did not wish to commence, at the end of the line, a long word the whole of which would not have been contained in the short space that was left over

The inscription is one of the *Mahārāja* Dhruvasēna [I.] of the Maitraka dynasty, and the grant contained in it is issued from the city of Valabhī   The object of the inscription appears to be to record the confirmation by Dhruvasēna of the donee, a Brāhmaṇa named Mādhava, of the Śunaka *gōtra*, student of the Chhandōga School, and resident of the village of Jyēshthānaka (stated to be Akshasaraka-*prāvēsya*) in the Hastavapra-haranī in the possession of some

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[1] My friend Pandit Girijasankar Vallabhji of Rajkot, Curator of the Prince of Wales Museum, Bombay, informs me that the five Pālitānā plates edited by Prof Konow (above, Vol. XI, pp 104 ff) were discovered at the same place and at the same time as the plates here described.

[2] Above, Vol. XI, pp 104 ff.

land already enjoyed by him in the village of which he was a resident Besides Hastavapra, which is the modern Hāthab (6 miles south of Gōghā in the Bhāvnagar State), and Valabhī, which is commonly identified with the modern Valā (situated in 21° 52′ N and 71° 57′ E), none of the places can be located The date of the record is the year 207 (given as usual in numerical ideograms), and the 5th (tithi) of the dark fortnight of Vaiśākha The year when referred to the Gupta-Valabhī era yields A D (207+320)=A.D 527

There are two expressions in this inscription, both occurring in the portion dealing with the grant proper, which deserve some comment they are Akshasaraka-prāteśya- (l 12) and sa-śaibaram (l 16) The latter we will consider first

Being mentioned along with the well-known technical expressions sa-hiraṇy-ādēyam and sa-bhāta-vāta°, sa-śaibaram must be a term of like nature, i e a technicality of the lawyers , but what its significance may be I am unable to surmise There can be no question regarding the correctness of the reading, the letters are perfectly distinct The word śaibara is not to be found in dictionaries, nor have I come across it elsewhere I can only think that it may be, as it stands, a clerical error, but I am unable to suggest any plausible emendation for it

The word prāteśya in the other expression referred to above is also one that presents some difficulty to the interpreter Here it is used in compound with Akshasaraka, evidently a place-name, and serves to locate more definitely the village Jyēshthānaka situated in the Hastavapra-haranī As far as I know, the word prāteśya has been met with only twice before once in another Valabhī grant, occurring there in a compound with the same place-name Akshasaraka, and once again in the Khariar grant of Mahāsudēva, compounded with the word Navannaka, which is also a place-name

The former record forms one of the five Valabhī grants from Pālitānā[1] edited by Prof Sten Konow, and is a grant of Dhruvasēna I , dated in Samvat 210 In that connection Prof Konow rightly points out that the phrase Akshasaraka-prāteśya of the grant corresponds to the Akshasaraka-prāpīya in a third Valabhī grant,[2] viz the Ganēśgad (Baroda) plates of Dhruvasēna, dated Samvat 207 Hultzsch, when editing the latter grant, translated the phrase by ' which belongs to the Akshasaraka-prāpa ' Prof Konow, who regards prāteśya and prāpīya as synonyms, rejects Hultzsch's rendering of Akshasaraka-prāpīya and advances the suggestion that prāteśya in this connection means the same thing as in the phrase a-chāta-bhata-prāteśya, and accordingly translates the phrase by ' which can be entered from (i e , which borders on) Akshasaraka ' I cannot, in the first place, admit that the expressions a-chāta-bhata-prāteśya and Akshasaraka-prāteśya correspond exactly For in the former the first member of the compound comprises the logical subject of the verb contained in prāteśya , but such cannot be the case with the second expression, even if we assign to it the meaning which Prof Konow does Secondly, I do not understand what is meant by saying that a village could be 'entered' from such and such a place If, moreover, prāteśya meant the same thing as 'bordering on,' as Prof Konow asserts, I cannot help thinking that the writer would have employed a simple word like samīpa or pārśva-vartin, which lie at hand, to express that simple idea of proximity rather than use the circumlocution of prāteśya or prāpīya Hultzsch, on the other hand, appears to me to be undoubtedly on the right track He looks upon prāpīya as a derivative of prāpa, which he takes to be a word denoting a territorial division smaller than an āhāra Similarly the analogous term prāteśya should also be looked upon as a taddhita of prāteśa That this derivation is correct may be seen from the Khariar plates of Mahāsudēva, in which a village is described (l 4) as Kshitimad-āhārīya and Navannaka-etat-prāteśya No one will dispute that āhārīya is derived from āhāra (' district,' ' province ') by the addition of the suffix -īya That supplies us with the clue to the explanation of the other words under consideration here All these words are derived

¹ Above, Vol XI, pp 104 ff , and Plates   ² Above, Vol III, p. 320, and Plate

by the addition of the secondary -(*i*)*ya* to the strengthened forms of the roots *ā-hṛi*,, *pra-(ā-)viś* and *pra-(ā-)āp* (' bring to,' 'carry to'), words with only minute differences of meaning I feel, therefore, constrained to reject the interpretation of Prof Konow in favour of the other *Prāpīya* I take to be 'that which belongs to the *prāpa*,' and *prāvēśya* 'that which belongs to the *prāvēśa* (or *pratēśa*)', both *prāpa* and *prāvēśa* I regard as territorial divisions smaller than the *āhār*.

<div align="center">

TEXT.[1]

Plate A,

</div>

10   [2]परमभट्टारकपादानुघ्या(ध्या) तो महागाजध्रुवसेन: कुशली सर्व्वानेव स्वानायुक्त-
      नियुक्तकचाट-

11   भट्टाधिकमहत्तरध्रुवस्थानाधिकरणिकटाण्डपाशिकादीनन्याश्च[3]   यथासंबध्यमान
      [4]कानु-

12   दर्यंयत्वस्तु वस्संविदितं यथा मया हस्तवप्रहरण्यामवसरकप्रावेश्य-[5]

<div align="center">

Plate A₂

</div>

13   ज्येष्ठानकग्रामे उत्तरसीम्नि पादावर्त्तयतं षष्ठयधिकं तस्मिन्नेव[6] ग्रामवे[7]व्यमुनवा-

14   सगोत्राणां छन्दोगसब्रह्मचारीणां[8] ब्राह्मणमाधवपूर्व्वभुज्यमुज्यमसानक[9](:) मातापित्रोः

15   पुण्याप्यायनायात्मना[10]चैहिकासुष्मिकयथाभिलषितफलावासिनिलिखिता[11]माचन्द्राकां-
      र्णवक्षितिसरित्-

16   पर्व्वतस्थितिसमकालीन पुत्रपौत्रान्वयभोज्य[12] सब्रैवरं मच्चि[द*]खादेय सभूतवा-
      तमत्यायविषुप्ता[13]

17   उदकातिसर्गेण ब्रह्मदेयं निसृष्ठ[14][*] यत एषां ब्रह्मदेयस्थित्या भुजता[15]
      क्रवतां प्रतिदिशताश्च[16]

18   स्वल्पाप्यावाधा[17] विचारणा वा न कार्याऽस्मद्वंशजैर्[18]गामिसद्वृटपतिभिश्च[19]निल्या-
      न्यैश्वर्य्याऽस्थिरं मानुष्यं

19   सामान्य[20] च भूमिदानफलमवगच्छद्भिरियमस्मद्दायोनुमन्तव्य [:।*] (उ) यश्चिक्निव्या-
      स्छिद्यमानं[21] वानुमोदे-

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[1] From the original plates, and a set of estampages

[2] Up to this, the text is practically identical with the text of the Pālitānā plate of Dhruvasēna I (dated *sc.–.ar.* 206), published above, Vol XI, pp 106 ff The only *variæ lectiones* are unimportant mistakes of orthography, which it would be unnecessary to register individually as the facsimiles are there for reference.

[3] Read °नाय.   [4] Read °कानु-

[5] In the original a short horizontal stroke after ष्य   [6] Read न्नेव.

[7] A short vacant space between व and व्य Read ग्रामवास्तव्य°   [8] Read °चारिणां ब्राह्मण°.

[9] Read °पूर्व्वमुज्यमुज्यमान°. The *anusvāra* is written over the line between कृ: and मा. The letters *pūrvvā bhujyā-bhujyamānakah* have been engraved over some faintly incised letters.

[10] Read न.   [11] Read त   [12] Read ज्य

[13] Read व'.   [14] Read ष्ट   [15] Read भुजता

[16] Read तोय   [17] Read °बाधा.   [18] Read रा

[19] Read या-   [20] Read ञ.   [21] Read यश्चिग्वादाछि'

20 क्व पंचभिः मद्दापातकैस्सोपपातकैस्सयुत्तस्य¹ऽपि चान्न व्यासगीताः स्त्रोका
भवन्ति [॥*] वडुभिर्व्वसुधा

21 भुक्ता राजभिस्सगरादिभि[: ।*] यस्य यस्य यदा भूमिः तस्य तस्य तदा
फल्लं [॥*] स्वदत्तां परदत्तां वा यो हरेत

22 वसुन्धरां [।*] गवां शतसहस्रस्य ह्न्तु[:*] ²प्राप्नोति किल्विषां³ [॥*] पूर्व्व-
दत्तां द्विजातिभ्यो यद्वाद्रच्च युधिष्ठिर(:) [।*]

23 मद्दि⁴ मद्दिमतां श्रेष्ठ दानाच्छ्रेयोनुपाछनम् [॥*] दूतकः प्रतीद्दारम्मम्मकः [॥*]
सं २०० ७ वैश्राख⁵ ब ५ [॥*]

24 स्वहस्तो मम मद्दाराजध्रु[व*]सेनस्य [॥*] लिखितं किक्कोनति⁶ [॥*]

TRANSLATION

[Ll 1-11 contain the usual preamble, for translation, cf, for instance, that of the opening lines of the Pālītānā plates, No 1, edited by Prof Konow, *Ep Ind*, Vol XI, p 108.]

(Ll 12-16) Be it known to you that for the purpose of increasing the religious merit of (my) mother and father, and for the sake of the attainment of the desired reward both in this world and in the next, I have confirmed, as *brahma-deya*, with libation of water, (the enjoyment of) one hundred and sixty *pādāvarttas*, on the northern boundary of the Jyēshthānaka village belonging to the Akshasaraka-*prātēsya* in the Hastavapra-*haranī*, which had (formerly) been and are (still) being enjoyed (by the donee⁷), for (the benefit of) the resident of the same village, (namely,) the Brāhmaṇa Mādhava of the Sunaka *gōtra*, a student of the Chhandōga School,—to last for the same time as the moon, sun, ocean, earth, the rivers and mountains, to be enjoyed by the succession of his sons and sons' sons,—with (?) *saibara*, with gold (and) *ādēya*, with *bhūta*, *vāta*, and (?) surety of holding (*pratyāya*)

(Ll 17-19) Wherefore, no enquiry should be made or obstruction caused (to him) by any one, while he is, according to the proper conditions of a *brahma-dēya*, enjoying, cultivating, or assigning (it to others) And this our gift should be assented to by those born in our lineage, and by future good kings, bearing in mind that power is perishable, the life of man is uncertain, and that the reward of a gift of land is common And he who confiscates it or assents to its confiscation incurs the guilt of the five great sins together with the minor ones

(Ll. 20-22) There are also two verses sung by Vyāsa about this

[Here follow two of the customary verses]

(L 23) The *dūtaka* is the *pratīhāra* Mammaka (Dated the) 5th (*tithi*) of the dark (fortnight) of Vaiśākha (in the) year 200 7

(L 24) (This is) the sign-manual of me *Mahārāja* Dhruvasēna [I]. Written by Kikkaka

B —ANOTHER PLATE OF [DHRUVASENA I.]

This plate, which contains only the opening portion of a land-grant of the Maitraka king Dhruvasēna I, is inscribed on one side only and measures roughly 10¾″ broad by 6½″ high The

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¹ Read त्स्या

² Over मा there is a peculiar sign, the meaning of which is not apparent [I think it is *upadmānīya*—Ed]

³ Read ष

⁴ Read द्दीं

⁵ Read° नेति.

⁶ Read° नेति.

⁷ The construction of line 14 is somewhat confused; it is not clear who the donee was, or who, at the time of the grant, was in possession of the land which is the object of the grant. As it stands, the text does not make any sense; my rendering is conjectural
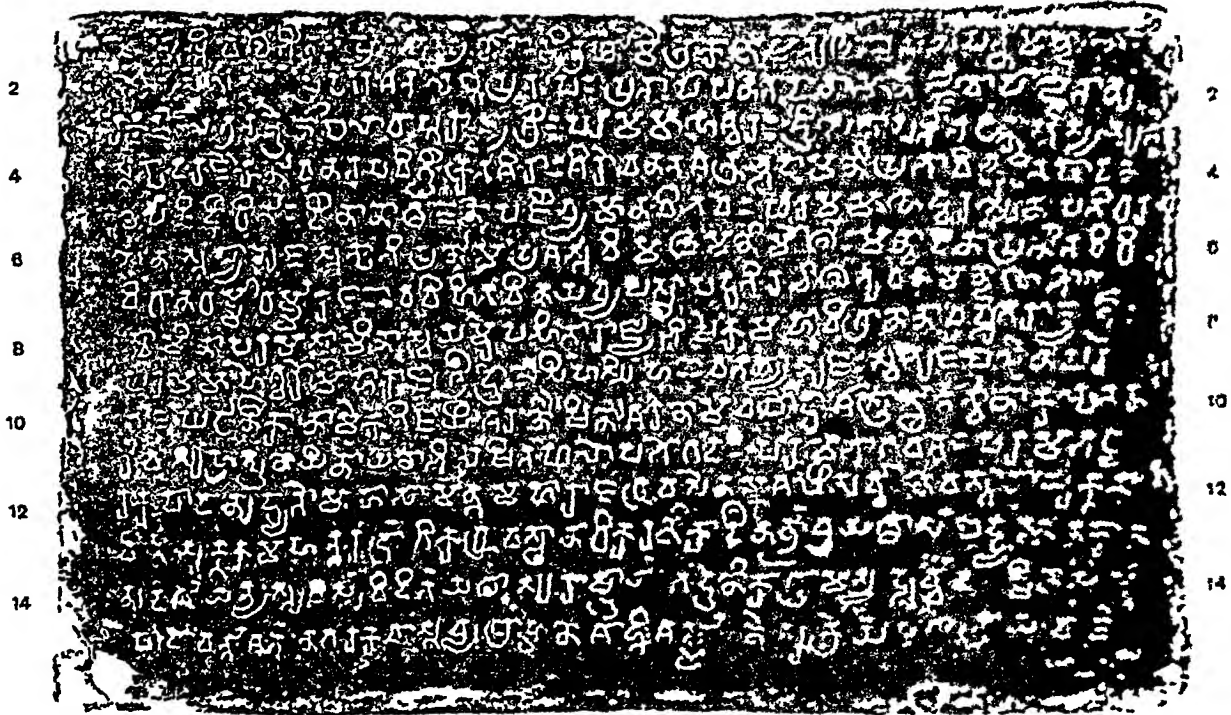
A i

A ii

Kathiawad Plate of Dhruvasena [I] · Samvat 206.

SCALE ONE-HALF
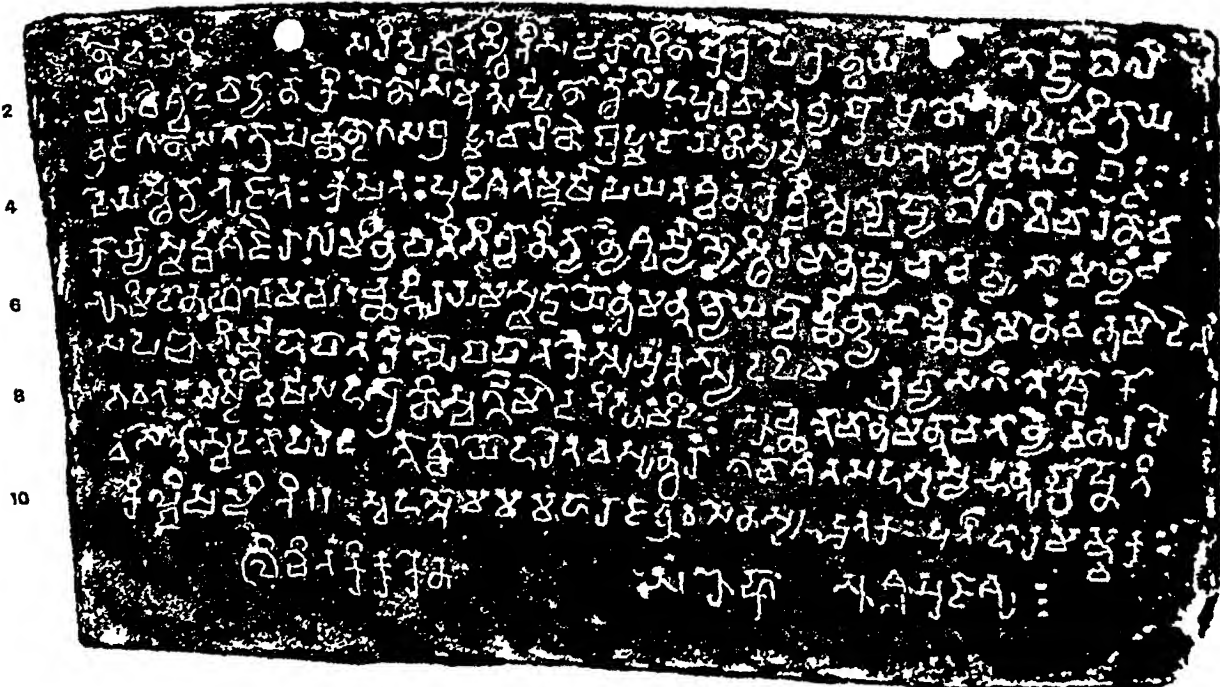
edges are just slightly raised, in order to protect the writing, which is in a state of excellent preservation throughout   The letters, which are deeply incised, show through on the reverse side of the plate   The engraving is well executed   The plate has a pair of holes bored at two adjacent corners and intended for receiving the ring and seal, which are missing   Its weight is 56 *tolas*   It contains fifteen lines of writing   The letters are of the period to which the plate refers itself, and of the type met with on other plates of the Maitraka dynasty   In short, this record is exactly like any of the large number of grants of Dhruvasena I that have latterly been brought to light   A detailed description of the characters, language and orthography of these plates, or even an English rendering of the text, seems superfluous   We may take it for granted that the *dutaka* of this grant was the *pratihara* Mammaka, and the writer Kikkaka

The grant was issued from Valabhi by the *Mahasamanta Maharaja* Dhruvasena [I] to the Brahmana Santisarman of the Atreya *gotra*, [a student of] the Vaji[saneya] School and a resident of Nagaraka, either bestowing upon him or confirming him in the possession of one hundred *padavarttas* of land on the south-eastern boundary of the village of Bhadreniku, situated in Surashtra

I am unable to identify Bhadreniku   Nagaraka is probably Vadnagar, the home of the Nagar Brahmans

<div align="center">TEXT.[1]</div>

<div align="center">*Plate B*</div>

12   . . . . [2]महासामन्तमहाराजध्रुवसेनकुशली सर्व्वानेव स्वानायुक्तक-

13   विनियुक्तकमहत्तरद्रागिकध्रुवस्थानाधिकरणिकादीनन्यांश्च   यथासंबध्यमानकान-

14   नुदर्शयत्यस्तु वस्संविदितं यथा सुराष्ट्रायां भद्रेणिकायामस्य पूर्व्वदक्षिण-
सिम्नि[3]

15   पादावर्त्तशतं नगरकवास्तव्यब्राह्मणशान्तिशर्म्मणे आत्रेयसगोत्राय वाजि[4]-

<div align="center">POSTSCRIPT.</div>

<div align="center">### A PLATE OF DHRUVASENA DATED SAM. 206</div>

Since writing the above I have come across a new Valabhi plate containing the concluding portion of a grant of Dhruvasena dated in *sam* 206, about which I should like to add a few words in continuation of the above note on the Bhavnagar plates.   This new plate was placed in my hands for decipherment by Mr. J C Chatterjee, Dharmadhyaksha (Secretary in the Ecclesiastical Department) to the Government of His Highness the Gaikwar of Baroda   It was sent to him, he told me, officially from Kathiawad for decipherment   that is all that I could elicit from him regarding its previous history   The plate is 11¼ inches long by 6½ inches broad, the edges are raised to protect the writing, which is in a state of perfect preservation, and the characters belong to the period to which the plate refers itself   in one word, the grant is similar in every respect to the records of the Valabhi kings that have hitherto come to light.

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[1] From the original plate, and a set of estampages
[2] Up to this the text is practically identical with the text of the Palitana Plate of Dhruvasena I (dated 206), published above, Vol XI, pp 105 ff.   In l 6, read °*t-pad-abhipranama°* for °*t-pabhipranama°* , and *Manvadina* for °*dina*
[3] Read °सीम्नि.   [4] The rest of the inscription is missing

The inscription is one of *Mahārāja* Dhruvasēna [I.] and records the grant of a village (of which the name must have occurred in the missing portion of the grant and is therefore now lost) to a Brāhmaṇa named Rōtghamitra of the Vrajagaṇa *gōtra*, a student of the Chhandōga School, and resident of Siṁhapura, for the maintenance of certain sacrifices   The grant is dated saṁ. 200 6, Āśvina śukla 3   The *saṁvat* year, when referred to the Valabhi era, yields A.D (206 + 319) 525   The *dūtaka* was Mammaka, and the writer Kikkaka, as usual.

The only point worthy of notice in this grant is the village-name Siṁhapura, which is mentioned in it as the residence of the grantee.   It is tempting to identify it with Sīhōr in the east of the Kathiawad peninsula, a junction on the Bhavanagar-Wadhwan Railway, not far from Valī the ancient Valabhī

[KATHIAWAD PLATE OF DHRUVASENA [I.]]

TEXT[1]

1   ravi-vi-kshiti-sarit-parvvata-sthiti-samakālinam   putra-pautr-ānvaya-bhōjyam   bali-

2   chara-vaivadῑ-ādyānām   kriyānām   samutsarppan-ārttham   Siṁhapura-vāstavya- brāhmaṇa-Rōtghamitrāya

3   Vrajagaṇa-sa-gōtrāya   (Ch)Chhandōga-sa-brahmachāriṇē   brahma-dāyam   nisṛishṭam [ᵃ]   yatō=sy=ōchitayā   brahma-

4   dēya-sthityā   bhumjataḥ   kṛishataḥ   pradiśataḥ=karshāpayataś=cha   na   kaiś=chit=svalp- āpy-ābādhā   vichāraṇā   vā

5   kāryy=āsmad-vaṁśājair=āgummi²-nṛipatibhiś=ch=ānityāny=aiśvairyyāny=asthiram   mānu- shyam   ch=āvckshya   sāmānyam   cha

6   bhūmi-dāna-phalam=avagachchhadbhir=ayam=asmad-dāyō=numantavyō   yaś=ch=āchchhin- dyād=āchchhidyamānam   v=ānumōdēt

7   sa   pañchabhir=mmahā-pātakais=s-opapātakais=samyuktas=syād=api   ch=ātra   Vyāsa-gītan ślōkaṇ

8   bhavataḥ   [ᵃ] shashṭiṁ[ᵃ]   varsha-sahasrāṇi   svarggē   mōdati   bhūmidaḥ[ᵃ]   āchchhettā ch=ānumantā   cha   tāny=ēva   narakē

9   vasēt   [ᵃ]   sva-dattām   para-dattā[mᵃ]=vvā   yō   harēta   vasundharām   [ᵃ]   gavām śata-sahasrasya   hantu[bᵃ]   prāpnōti

10 kilbisham[ᵃ]=iti   sva-hastō   mama   mahārāja-Dhruvasēnasya   [‖ᵃ]   dūtakaḥ pratthāra Mammakaḥ   [‖ᵃ]

11 likhitam   Kikkakēna   [‖ᵃ]   saṁ   200   6   Āśvayuja   śu   3   [‖ᵃ]

No 6.—SRIRANGAM COPPER-PLATE GRANT OF DEVARAYA II; SAKA 1349 (1350)

BY THE LATE T A GOPINATHA RAO, M.A , TRIVANDRUM

The temple of Śrī-Raṅganātha at Śrīrangam possesses, among others, two sets of copper-plates belonging to the reign of the Vijayanagara king Dēvarāya II   The inscriptions engraved upon these two sets are edited below from the impressions prepared under my supervision.

No I.   SAKA-SAMVAT 1349

This set consists of three plates (size 10⅜ × 6⅛ in), of which the first and the third bear writing on one face only, namely, the second side of the first and the first side of the third.

The inscription is in good state of preservation   The alphabet in which the record is written is
Nandināgarī, and the language partly Sanskrit and partly Kannada   The first section covers
41 and the second 34 lines, and the remaining portion contains the usual admonitory and impre-
catory verses   At the end appears as is usual with the documents of the kings of the first
dynasty of Vijayanagara, the word *Śrī-Virūpāksha*, the sign-manual of the king, written in the
Telugu-Kannada alphabet   The same sort of mistakes, careless execution of the engraving,
leaving room for a number of corrections, erasures, interlineations, etc, and other faults common
to the other grants of this period are to be found in these two sets of copper-plates also, there
is no necessity for them to be noticed in detail here, they are noted in the foot-notes at the
appropriate places

The record is dated Śaka 1349, which is expressed by the chronogram *dhualoka*, this year
corresponded to the cyclic year Plavanga   In the Kannada portion the Śaka year is given as
1350, and the same Plavanga is said to be current   On a Sunday, which was the Utthāna
dvādasī *tithi* in the bright half of the month Kārttika, the king Dēva-Rāya II granted to the
God Ranganātha of Śrīrangam the village of Pāndamangalam together with the sub-villages,
Tirunalūr, Sēranaibanda-perumā-nallūr, and Sunepuha-nalūr, in the name and for the
merit of his mother Nārāyanāmbikā   The genealogy of the king is traced thus —

<div align="center">

Sangama
|
His middle son
Bukka I
md Gaurāmbikā
|
Harihareśvara
|
Pratāpa-dēva-Rāya I
md Dēmāmbikā
|
Vijaya-Bhūpati
md Nārāyanāmbikā
|
Dēva-Rāya II

</div>

Dēva-Rāya II bears the *birudas*, *Rāj-ādhirāja*, *Rāja-param-ēśvara*, *Bhāsh-ātilanghi-bhūpāla-
bhujanga* (= *Bhāshege-tappuva-rāyara-ganda*), *Mūru-rāyaravganda* and *Hindu-rāya-suratrāna*.
Having ascended his ancestral throne and while protecting the kingdom, residing in his capital
Vijayanagara, which is situated on the bank of the river Tungabhadrā, king Dēva-Rāya made
the grant mentioned above in the presence of the god Virūpāksha on the bank of the Tungabha-
drā   The villages Pāndamangalam, Tirunalūr and Sēranaibanda-perumā-nallūr are said to have
been situated in the Rājagambhīra *valanādu* on the south side of the river Kāvērī, and Sune-
puha-nalūr in the Mēlmuri of the Mala *nādu*, a sub-division of the Rājarāja *valanādu*, on the
north of the same river   The Kannada portion adds that the villages belonged to the Amarada
hōbali   All of them belonged also to the Tiruchchirāppalli *rājya* or *chāvadi*   The purpose for
which the grant is made is given in full detail in the Kannada portion   From the income of
the villages twelve perpetual lamps should be burned, flower-garlands dedicated and one festi-
val celebrated   The grant was made as an auxiliary to the *Gō-sahasra Mahādāna* performed by
the king   The grant was ordered to be executed from the first *tithi* of the bright fortnight of
the month Āshādha   The income from the villages situated on the south of the Kāvērī was
1403 coins (*kula-gadyāna*), and that from the village on the north of the river 420, total 1,82

gadyānas. A number of taxes leviable in these villages are included in the grant, they are taxes on the *napšey, puṇšey, pūm-payir, vāšal-* and *maṇai-ppēru-kaḍamai, tari-kkaḍamai, māravaḍai, maravaḍai, kulavadai, kalāyam, tirigai-āyam, pēr-kaḍamai (tari-kaḍamai), āḷukku-nīr-pāḷḷam; mahamai, kattigai-avasaram, palai-kānikkai, Ādi-Kārttigai-pachchai,* and all old and new taxes Several of these have remained unexplained up till now. It is easy to understand the nature of the first four, they are levied on wet and dry cultivation, on inferior crops, on houses and compounds and on looms, *māvaḍai, maravaḍai* and *kuḷavaḍai* are taxes on animals, trees and tanks · that is, perhaps, when animals are sold in markets, on fruit-bearing trees and for fishing in tanks *Kalāyam* literally means tax on stone, it is very likely a tax payable for quarrying stones from hills, what tax is meant by *tirigai-āyam* is not known *Pēr-kaḍamai* means taxes on persons, a sort of poll-tax evidently. *Āḷukku-nīr-pāḷḷam* is a tax for maintaining the person appointed for making regular supply of water to the fields this appears to be the same as *nīrānikkam* *Magamai* is a corrupt form of *magamai,* the nature of being a son to another, this levy is still in force among certain merchants in the Tanjore and Trichinopoly districts On all sales and purchases the merchants collect a small, but fixed, sum and utilize the money thus collected for some public purpose Compare similar words, as *kāyirmai* corrupted into *kōyma, ūrānma,* etc *Kattigai-avasaram* appears to be some sort of tax on fire-wood, and *palai (paḍai)-kkānikkai* is the contribution to be made for the maintenance of the army. *Pachchai* means a *kānikkai,* a *nazar,* a present on important occasions In this sense the word is employed in contemporary literature, for instance, in *Śrī-rachana-bhūshanam,* I, 33 and 34 Such *kānikkais* seem to be given in the months of *Ādi* and *Kārttigai.*

The following places and rivers are mentioned in the inscription —Tuṅgabhadrā, Vijayanagara, Tiruchchirāppalli, Kāvērī, Rājagambhīra *valanāḍu,* Pānda-maṅgalam, Tirunalūr, Śēranaibanda-perumā-ṇallūr, Rājarāja *valanāḍu,* Mēlmuṛi·of the Mala *nāḍu* and Śuṇepuha-nalūr. Of these the Tuṅgabhadrā and the Kāvērī are the well-known rivers of South India Tiruchchirāppalli is the modern town of Trichinopoly, the head-quarters of the district of the same name The part of the country immediately to the south of the river Kāvērī was known to medieval inscriptions as the Rājagambhīra *valanāḍu,* and that on the north of the same as the Rājarāja *valanāḍu* Mala *nāḍu* is a sub-division of this territory and has given its name to a section of the Tamil Brāhmaṇas, *i.e.* the Bṛihach-charaṇa community of Mala *nāḍu* Vijayanagara, the capital of the famous Hindu kings of Southern India, is the modern Hampe on the Tuṅgabhadrā Pānda-maṅgalam is a village a mile and a half west of Trichinopoly, this and Tirunalūr are in the Trichinopoly *Tāluk,* the correct form of the name Śēranaibanda-permā-nallūr is Śēraṇai-venṛa-perumāl-nallūr There is a village some distance south of Pānda-mangalam called Vēndarāya-nallūr. This is perhaps the same. Śuṇepuha-nalūr is situated at a distance of seven and a half miles to the north-west of Trichinopoly

TEXT

[Metres · vv 1-25, *Anushtubh,* and v. 26, *Śālinī*]

First Plate Second Side.

1 श्रीगणाधिपतये नमः [॥*] नम(:)) स्ते [॥*] नम(:) स्ते [॥*] नम(:) सुगत्कि

2 स्तुर्विं चंद्रचाम[र*][चा]रवे [।*] त्रैलोक्यनगरारंभमूल-

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¹ From impressions prepared under my supervision   ² Read °सुर्विंचंद्रचासुचि.

3 स्तंभाय संभवे¹ (तु) ।[। 1°] भू[य*]खं² अवतां भूतै³ भूयादाद्क्षयं-⁴

4 कुंजर:[।*] आद्रुविंद्यारक्तांतार खं[त*]⁵गमान्यस्य [यो]-

5 गिन: ।[। 2*] श्रीसं व: प्रचुरीकुर्यात्त्चोर्णीसंभ्युद्घनयं⁶[।*] [क्रो]-

6 डाक्ततेरभूद्यस्थ क्रीडापल्व[ल]सम्बुधि⁷[:॥ 3*] अस्ति चोरा[र्णे]-

7 वोद्भूतमपां पु[ष्प]सनुत्तमं⁸ । मज्जानदं निर्माल्यमाध-⁹

8 त्ते शिरसीश्वर: [॥ 4*] सदासोदनिधेस्तस्य संतानेयद्र[सं]-¹⁰

9 [ज्ज्ञि]ते [।*] अभूदाचर्यम[ग]धुर्यं वसुधायास्तप:फलं [॥ 5*]

10 संगमो नाम रा[जा]भू [त्वा]रभूते तदन्वये [।*] रेजे यस्य

11 यश:श्रिंघौ:¹¹ सर[णी]व सुरापगा [॥ 6*] सर्वरत्ननि[ध्रि]-

12 स्तस्य सन्नाडासीत्तनूभुवं¹² । मज्द्वे बुक्कमद्वीपालो स-

13 गीनामिव कौस्तभ: [॥ 7*] तस्य गौरांविकाजानिस्त(नयो वि)-

14 नयोभून्तुयं¹³चत: [।*] [च्चा]रगौरयश्च.पु¹⁴रच्चारिचरिच[रे]-

15 श्वर: [॥ 8*] ¹⁵यपोडंग्मचादानयमसां दिग्विद्यारिणां [।*] भूय[सा]-

16 मभवंनाल्ल¹⁶ भुवनानि चतुर्दश [॥ 9*] प्रतापदेवरायाख्य:

17 पुत्रोभ[द्र]¹⁷वि विश्रुत: [।*] प्रमोद इव मूर्त्तो य: प्रजानां खेगु-

18 र्गैर[भु]¹⁸त् [॥ 10*] प्रत्य[र्थि]समिधो हुत्वा प्रतापाग्नौ रणांकणे [।*]¹⁹

19 विजितो चीन(।) वीरेण विजयश्रीकरयद्य: [॥ 11*] तस्य दे-

20 मांविकाषानिस्तनयो विनयोन्नत: [।*] विद्यानिधि-

21 विंश्वेषश्री वीरो विजयम्रूपति: [॥ 12*] दयानिधेर[भू]-

22 त्तस्य देवीनारायण्यांबिका [।*] शौरेरिव मद्वालच्मी: श्रं-

23 [क]रख्येव पार्धती [॥ 13*] पुत्ररूपं तयो [:*] स्वाद्वयं पु²⁰र्वेजन्म त-

Second Plate - First Side

24 प:फलं [।*] देवरायमद्वीपालो दाता दीव्यति भूतले [॥ 14*]

25 विक्रमे विक्रम[ा*]दिल्यं भोगि भोजमिवापरं [।*] राजराजं वि-

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¹ Read ज्ञ°
² Read भूयस्वे
³ Read भूत्यं
⁴ Read °दाचर्यं.
⁵ Read कान्तारसा°.
⁶ Read °द्भयम्.
⁷ Read °सम्बुधि:.
⁸ Read °सम्.
⁹ Read मज्जानं यदनिर्माल्य°.
¹⁰ Read सन्तान यदुद्धंजितम्.
¹¹ Read यश: श्रिघोः:
¹² Read साम्राडासीत्तनूभूवाम्.
¹³ Read यों
¹⁴ Read पु.
¹⁵ Read यद्धीडङ्ग°.
¹⁶ Read °द्बाज्जं
¹⁷ Read °द्गु.
¹⁸ Read °भू.
¹⁹ Read रणांङ्गणे
²⁰ Read पु.

F

26 तरणे राजानं यं प्रचचते [॥ 15*] असंगसंगकाऌिंगवंगाद्या-

27 च्चासरादिभिः [।*] राज्वानो यं दिवेवंते¹ राजचिन्हैः स्वयं[द्ध]-

28 तैः [॥ 16*] राजाधिराज(:)खेजस्वी यो राजपरमे[च्च]रः [।*] आपाति-

29 लंघिभूपालभुजंगबिं[च्च]दोंचत:² [॥ 17*] स्वरूदायरगडाक:³

30 परराजभयंकर: [।*] हिंदूराय[च्च]रचाषी⁴ वंदिवर्गेण वं-⁵

31 ख्यंते [॥ 18*] श्रीतुंगभद्रापरिचे नगरे विजयाह्वये [।*] पिच्यं

32 सिंह्रासन प्राप्य पालयन्द्ध[यि]वोति⁶िां [॥ 19*] पुण्य⁷ह्ले[ा*]का-

33 ग्रगं[ख्यो]⁸स्वी देवरायमचीपति:[।*] धिवलोके सकाश्य-⁹

34 [च्चे] द्ध[वंगा]द्वय[वच्छ¹⁰रे] [॥ 20*] का[र]त्तिके मासि सुंधायां¹¹ द्वाद[श्या]-

35 साक्कवास्यये¹² [।*] तुंगभद्रानदीतो[रे] श्रीविरूपाचसंनि-

36 [धो] [॥ 21*] चि[सि]रापक्तिरा[च्ये] रांजगंभीरवलिसिंदे¹³ काचेरिय-

37 दचिणे पाडसंगलघा[म*] [द्ध]लुभी तिस्ननलूरपि¹⁴ चेरनैवंड-

38 पेरुमानलुरपि उत्तरेयाह्वकंन्यायां¹⁵ राजराजवलभि-

39 घे प्रह्नजपदे सुनेपुच्चनलुरधा उभौ श्रीरंगराजश्य परि-

40 याथं ¹⁶नारायणबभिध[ा*]नत: घैनैव¹⁷ देवराजेन दत्तं श्रीव-

41 नींबुधारया¹⁸ ॥ स्वस्ति श्री जयाबुदाय शैक्कवर्घ¹⁹ १२५० ह्लवं-

42 गसंवच्छ²⁰रद कार्तिकसुध उत्तानद्व[ा*]दसि²¹पुष्खकालह

43 श्रीमं²²न्महाराजाधिराजपरमेस्च²³र श्रीवीरप्रतापदे-

44 वरायमहारायश्च श्रीरंगनाथदेवरिगि नारायणदेवी-

45 श्वे[ा*]वगल चेश्वरिन श्रीदु अवसरव नछस्व च्रदको²⁴ दिन

46 [श्रो]दको²⁵ च्छ्नेरडु . परिवाऌनंदादीविगीयगस्माले श्रो-

Second Plate. Second Side

47 दु तिस्ननालु ग(ा)ड्ववुदको²⁴ कोष्ठ दर्म्याससन²⁶ [।*] उत्तानद्व[ा*]-

¹ Read निवेश्वते   ² Read भुजङ्गविश्वदोऽनतः.   ³ Read °गड़ाङ्..

⁴ Read हिन्दु°   ⁵ Read य.   ⁶ Read °सि.

⁷ Read पुण्य   ⁸ Read °गख्योसी.   ⁹ Read शकोचाद्दे.

¹⁰ Read रस्   ¹¹ Read ग्रसायां.   ¹² Read रे.

¹³ Read राजगंभीरस्वासिघदाचेर्यां.   ¹⁴ Read पाण्डसद्वयास रत्लुसी-   ¹⁵ Read सत्यकन्याया.

¹⁶ Read श्रीरुद्रालच परिपर्याघं .   ¹⁷ Read °साम्याभिघागत, चैनैव.   ¹⁸ Read सर्वासुधारया.

¹⁹ Read जयान्युदयमक.   ²⁰ Read रस्.   ²¹ Read छ्वान्गादशी.

²² Read म   ²³ Read च   ²⁴ Read °वदको.

²⁵ Read भान्दरे   ²⁶ Read धर्म°.

F W THOMAS

SCALE TWO-THIRDS

48 दसोपुंण्य¹कालदलु तुंगभद्रातीरदलि श्रीविरूप[र]-

49 चसंनिधियल्लि नाऊं² माडिद सह्सगोदानागव[र]-³

50 गि श्रीरंगनाथदेवरिगि षंगरंगभोग अमिरितु-

51 पडिगे तल्सवच्छरद षामाऊ सुध पाद्य⁴ आरभ्य-

52 वागि चिरिप्र⁵पळ्ळिचावडिय राजगंभीर श्रीऊ

53 नाड षमरदछोभलिय पांडमगलद ग्राम १ द-

54 दरनुदमि तिरनालूर ग्राम १ सेरनेभंडपेद-

55 मालिनलूर⁶ ग्राम १ भतुं⁷ पिडाकैसद्द ग्राम औद-

56 के कुल १४०३ [।*] वडकरे⁸ राजराजवळना-

57 ड मलनाड सेलेसुरिय सुनेपुएनलुर ग्रा-

58 म श्रींदके⁹ कुल ४२० [।*] उभय(:)ग्रामयेरऊ-

59 कां कुऊगद्य[र*]ग १५२३ [।*] वंदग्राम एर-

60 डर चतुसीमेगे सलुव नंचे पुंचे वां-

61 नृपयिद पुंपौद वांसलुमनेपेदक-

62 डमे¹⁰ तरिकडमे¹¹ मावडे मरवडे

63 कुऊवडे कन्दायं तिरिगे षायं पे-

64 कडमे¹² तरिकडमे श्रोलुकुनीपा-

65 टं मदमे कठिगेश्रवसर पटे-¹³

66 काणिके षाडिकातिकै(र)पचे म-

67 तु¹⁴ एनुब्र्लता घोसवरि¹⁵ छलेव-

Third Plate First Side.

68 रि सुंताद सकाल सुवर्नादाय सकलभता-¹⁶

69 दाय निधिनिचेपजलपाषाण श्रचिणि षागमि

70 सिद्साध्य सुंताद अष्टभोगतेज[:*]स्तास्यस[चि]तव[र]-

71 विमाचंद्राकं स्ता¹⁷यियागि सर्वमान्यवागि सेरिसि

72 कोटेवागि श्रीरंगनाथदेवरिगि षंगरंगभो-

73 ग षसुतपडियनु नडसि सुकदिं षनुभविसु-

74 वदु ॥ दानपालनयोर्मध्ये¹⁸ दानाच्छ्रेयोनुपालनं [।*] दा-

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¹ Read पुण्य.
² Read नाचु.
³ Read °गाद्वागि
⁴ Read तल्सवरचरद षायाटग्रद पाष्यमे
⁵ Read तिरिष्चिरापहि.
⁶ Read षेरनेवेनृरपेद्रमाल.नछूर.
⁷ Read भनु.
⁸ Read वडकरे.
⁹ Read श्रांद्के.
¹⁰ Read पुन्पयिद्.वागव्.मनेपेदकडमे.
¹¹ Read कडमे.
¹² Read पेर्कडमे. *This and tari-kadamai are repeated unnecessarily*
¹³ Read डे.
¹⁴ Read °कार्चिकै पच मचु.
¹⁵ Read घोसवरि.
¹⁶ Read ता.
¹⁷ Read स्या(.
¹⁸ *The letter* न *in* पाळन *looks like* व.

75 नात्स्वर्गसवाप्नोति पालनादद्तं पदं ॥ [22*] खदत्तां [प]-

76 रदंत्ता² वा यो हरेत वसुंधरा[म् ।'] षष्टिवर्षसह[स्रा]-³

77 णि विष्टायां जायते क्रिमिः⁵ ॥ [23*] 'एकैव भगिनी लोके स-

78 र्वेषासेव भूसुजां [।*] न भोग्या न करग्राह्या विप्रद-

79 त्ता वसुधरा ॥[24*] खदत्तांदि⁶गुर्थं पुर्थं परदत्तानुपाल-

80 नं [।*] परदत्तापदारेण⁷ खदत्तं⁸ निष्फलं भवेत् ॥[25*] सामान्योे-

81 यं धर्मसेतु नृपाणां काले काले पालनीयो भवद्भिः । सर्वा-

82 निघतान्¹⁰न्नाविन[:*] पार्थिवेंद्रान् भुयो भुयो¹¹ याचते रामचंद्र[:॥26*]

83 श्रीविरूपाच्¹²

ABSTRACT OF CONTENTS.

Verse 1 Adoration to Śambhu (Śiva)

V 2 Adoration to Ganēśa

V 3 Adoration to Varāha

Vv 4-5 On earth, as the fruit of its *tapas*, was born Yadu in the family of the Moon, which came out of the ocean of milk and is worn by Śiva on his head

Vv 6-7 In his race was born a king named Sangama   His middle son was Bukka, who resembled the jewel *kaustabha* among other jewels

Vv 8-9 To him by Gaurāmbikā was born a son, named Harihara, who was gentle and famous   The renown of his making the sixteen great gifts (*mahādāna*) redounded even beyond the fourteen worlds

Vv 10 12 His son was Pratāpa-dēva-Rāya, who appeared the embodiment of the happiness of his subjects   He conquered his enemies in battles by the prowess of his arms and obtained the favour of Vijaya-Lakshmī (goddess of Victory)   To him, as husband of Dēmāmbikā, was born the prince Vijaya-Bhūpati

Vv 13-18 The queen of Vijaya-Bhūpati was Nārāyanāmbikā. As the fruit of the meritorious acts done by them in their previous birth, Dēva-Rāya was born to Vijaya-Bhūpati and Nārāyanāmbikā and distinguished himself on earth   He is compared to Vikramāditya in valour, to Bhōja in his *bhōga* (?) and to Rāja-rāja (i e Kubēra) in his munificence   The kings of the Anga, Kalinga, Vanga, etc, countries did homage to this king, holding *chāmaras* and other royal insignia in their hands   He bore the *birudas* Rāj-ādhirāja, Rāja param-īśvara, Bhāsh-ātilanghi-bhūpāla-bhujanga, Mēru-rāyara-ganda, Para-rāja-bhayan-kara and Hindu-rāya-suratrāna

V 19 to the end of line 41   Dēva-Rāya, who, seated on his ancestral throne in Vijayanagam, which has the Tungabhadrā as its ditch, ruled the earth, made the grant of the villages of Pānda-mangalam, Tirunālūr, Sēranaibanda-perumā-nalūr and Sunepuha-nalūr to the god Ranganātha   The gift was made in the Śaka year 1349, which is given by the chronogram *dhi alō* a and which corresponded to the (cyclic) year Plavanga, on a Monday

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¹ Lead पु   ² Read टत्ता   ³ Read पदि° इखादि.

⁴ Read ह्रा   ⁵ Read क्रिमि.   ⁶ Read °दि

³ [Read °सरेत—EI]   ⁸ Read °पदारेण खदत्त   ⁹ Read नृ°

¹⁰ Read °निघतान् भाविन .   ¹¹ Read भुयो भूयो.

¹² This line is written in Telugu-Kannada characters.

the twelfth *tithi* of the bright fortnight in the month Kārttika, in the presence of the god Virūpāksha on the bank of the river Tungabhadrā The villages Pānda-mangalam, Tirunālūr and Sēranaibenda-perumā-nalūr are said to have been situated on the south bank of the river Kāvērī, in the Rājagambhīra *valanādu*, belonging to the Trisīrāppalli *rājya*, and Sunaipuha-nalūr in the Rājarāja *valanādu* of the same *rājya*, but situated on the northern bank of the Kāvērī

Lines 41-74 In the Śaka year 1350, Plavanga, on the auspicious occasion of the Utthāna-dvādasī in the bright half of the month Kārttika, the king Vīra-Pratāpa-dēva-Rāya Mahārāya gave the following *sāsana* (order) for performing one *avasara* consisting of twelve *harivānas* of perpetual lamps, garlands and one festival every day to the god Ranganātha in the name of Nārāyanadēvi-auva the gift of the villages of Pānda-mangalam, Tirunālūr and Sēranaibanda-perumā-nalūr, yielding 1,403 *kula-gadyānas*, and Sunepuha-nalūr, yielding 420 *kula-gadyānas*, was made for the *anga, ranga*, etc, of the god Śrī-Ranganātha, as an auxiliary to the *gō-sahasra mahādāna* made by the king on the auspicious occasion of Utthāna-dvādasī in the presence of the god Virūpāksha on the bank of the river Tungabhadrā The villages Pānda-mangalam, Tirunālūr and Sēranaibanda-perumā-nalūr were in Amarada *hōbali* of the Rajagambhīra *valanādu* in the Chirichrāpalli *chāvadi*, whereas Sunepuha-nalūr was situated in the Mēlamurī of the Mala *nādu*, a sub division of the Rājarāja *valanādu* in Vadagarai (northern bank of the Kāvēri) These villages were to be enjoyed from the first *tithi* of the bright fortnight of the month Āshādha of the same year The king granted these villages with the following rights of enjoyment namely, the taxes on the lands under wet and dry cultivation, as also *vān-payir* and *puṇ-payir*, the taxes called thev *āsal-, manai-pēru-kadamai, tarikka-damai, māvadai, maravadai, kulavadai, kal-āyam, tirigai-āyam, pēr-kkadamai, tarikkadamai, ālukunipāttam, mahamai, kattige-avasara, padai-kānikkai, Ādi-Kārttigai-pachchai* and all other new and old taxes, all income in gold and paddy and the eight kinds of enjoyment, *nidhi, nikshēpa*, etc

Vv 22-26 The usual admonitory and imprecatory verses

Line 83 contains the words *Śrī-Virūpāksha*, the king's signature

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No 9.—MOMIGATTI INSCRIPTION OF THE 49TH YEAR OF VIKRAMADITYA VI.

By LIONEL D BARNETT

Momigatti is a village in Dhārwār District, a few miles to the north-west of Dhārwār town, in lat 15° 30½' and long. 74° 59', according to the Bombay Survey[1] The present inscription, now published for the first time, was found in the local temple of Kalamēsvara, on the left side of the image An ink-impression was prepared for the late Dr Fleet, which is now in the British Museum , from it I have edited the text The stone has a rounded top decorated with sculptures, namely, in the centre a *linga*, on the proper right of which is a priest standing facing it, while another upright figure stands to the proper left, all three being in a shrine , to the proper right of the priest, a cow and calf , to the right of the latter, a scimitar ; in the opposite corner, a bull , above these, the sun (on proper right) and moon (on left). Below this is the inscribed area, in two compartments the first of these, comprising lines 1-2, is 2 ft. 3½ in wide and 2¼ in high, and the second, containing lines 3-30, is of the same width and 2 ft 9 in high.—The character is good Kanarese, of an upright rounded type that was beginning to come into use about the middle of the twelfth century. The height of the letters varies from ½ in to ⅝ in. The *jh* (l 9) and *ñ* (ll. 19, 26) may be noted —The language is Old Kanarese, with two

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[1] The "Meemoeguttee" of the Indian Atlas seems to be intended for Momigatti ; but its position does not quite tally with that of the latter as given in the Survey

formal Sanskrit verses (Nos 1 and 5)　The ancient *ḷ* has been changed to *l* in *kūlam* (1. 14), *bēḷpa* (1 16), *alidavarggey=* (1 27), *ēl-kōti* (1 28), and to *r* in *garddey[u*]maṁ* (1 22) ; it is falsely used for *r* in *toḍaḷd=* (1 16)　*P* is changed to *h* in *halli°* (ll 19, 20), but elsewhere retained Three words are of some lexical interest, viz *tyāga-jaga-jhampi jhampalāchāryya* (1 9), on which see above, Vol XII, p 251, and *nrita* (1. 14), which is abstracted from the ordinary *sūnrita*, and is parallel to *anritika*, " untruthful " in Aśvaghōsha's *Buddha-charita*, II 11

The record, after referring itself in ll. 2-4 to the reign of Tribhuvanamalla (Vikramāditya VI), introduces the Kādamba feudatory Jayakēsi [II], who is decorated with the characteristic titles of his dynasty, and his senior queen Mailala-dēvi (the daughter of Vikramāditya VI), as jointly reigning (ll 4-13)　On the historical points involved herein it suffices to refer the reader to Vol. XIV above, p 299 f　Then follow verses in praise of Vāmaśakti, a Śaiva divine, and Udayamma Gāvunda (ll. 13-17), after which comes the formal statement of a gift of land and houses by the latter to the sanctuary presided over by Vāmaśakti (ll 17-24)

The date is given on ll 17-18 as　the cyclic year Krōdhi, the 49th of the Chālukya-Vikrama era , Āshāḍha śuddha 5 , Sunday　This is irregular　The given *tithi* was current at sunrise on　Wednesday, 18 June, A.D. 1124, and ended about 9 h 16 m after mean sunrise [1]

The only places mentioned are Kundūr (1 19), Eranigereyahalli (1 19), Konnasagere (1 21), and the *tirthas* (1. 25)　Kundūr is the modern Narēndra, on which see above, Vol XIII, p 298

TEXT.[2]

[Metres　vv 1, 5, *Anushtubh* , vv. 2-4, *Kanda*]

1　Namas=tumga-ś[i*]raś-chumbi-chamdra-chāmara-chāravē　[i*]　trailōkya-nagar-ārambha-mūla-stambhāya　Sa(śa)mbhavē ‖ [1*]

2　Svasti　samasta-bhuvan-āśraya　Śrī-Pri(pṛi)thvi-vallabha　mahārājādhirāja paramēśvara　paramabhatt[ā]-

3　rakam　Satyāśraya-kula-tilakam　Chāluky-ābharanam　śrīma[t*]-Tribhuvanamalla-dēvara　vijaya-rājyam=u-

4　ttarōttar-ābhivridhdhi-pravardhdhamānam=ā-chamdr-ārkka-tāram-baram　saluttam-ire ‖
　Tat-pāda-padm-ōpajīvi ‖

5　svasti　samasta-bhuvana-samstūyamāna　Hara-Dharani-prasūta-Trilōchana-Kadamba-vamśa-mah-ōda[ya]

6　Mahīdharēmdhra(dra)-śikhar-ābhyudayamāna-mahā-prachamda-mārttamda　mārttamda-kar-ātitivra-nija-pratā[pa]-

7　vaśīkri(kri)ta-sakala-mahī-mamdalan=uttumga- simha-lāmchchhanam　vānara-mahā-dhvajam　permmatti-tūryya-nirgghōshanam

8　chaturā(ra)śīti-nagar-ādhishthit-āshtādaś-āśvamēdha-dīkshā-dīkshita-kula-prasūta　Himag-vad-girimdra-rumdra-śikhara-

9　sthāpita-mahā-śakti-prabhāvam　tyāga-jaga-jhampi　jhampal-āchāryya　niśśamka-Rāma śu(su)bhata-kanaka-nikash-ōpala

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[1] I have to thank Mr R Sewell for his kindness in verifying my calculations.
[2] From the ink-impression.

10 śaran-āgata-vajra-piakāra lōk-aika-kalpa-druma samkiānti-dhavala   mūitti-Nārāyana
kirtti-mārttamda

11 mandalika-lalāta-paṭa   vairi-gharatta   śu(su)bhaṭa-iāja-śikhāmani   Kādamba-
chūdāman=ity=akhila-nām-āva-

12 h-samā(ma)lamkṛitar=appa   śrīman-mahāmamdalīśvaram   Jayakēsi-dēvar   śiimat-
pariy-arasi Mailala-ma-

13 hādēviyaru   sukha-samkathā-vinōdadim   rājyam-geyyuttam-ire || ⊚   Pasid=āi=
bhind=una bōdidod=osed-a-

14 tt=ill=ennad=ikknt-irppare kūlam vasndhātalam=ellam banmisuvinegam Vāmaśakti-
pamḍita-dēvar || [2*] Nrita-vākyam vamdi-ja-

15 n-āśrita-sura-taru Malla-Gavumdan=arra(gra)-tanūjam   matimantam Hara-bhaktam
kshitiy-olag=Udayamma-Gavu-

16 dan=uttama-purusha || [3*] Sidil=uunam ripu-nichayam todaḷd(id)=edeyol bēlpa
janako sura-taruv=annam kudut=e-

17 deyol Bānana vol Mrida-bhaktam dharanītaladol=Udayama-Gavumda¹ || [4*] ⊚
Svasti śiimach-Chālukya-

18 Vikrama-varshada   49neya   Krōdhi-samvatsarad=Āshāda(dha)   su(śu)ddha   5
Ādityavāradamdu śrīman-mahā-pa-

19 ttanam Kundūra padinaruvar=ggāvumdugala Pañcha-matha-sthānada sannidhiyol=
Eranigereyahalliy-Ā-

20 karika(?)² Malla-Gāvumdana magan=Udayama-Gāvumdam halliyindam paduval=
kal-pumjikey=adarim mū-

21 dal=ondu muttar=pparala keyyuman=ūr=umba Konnasagereya mūdana kōtijalu nūru
ka-

22 mma garddey[u*]mam dēvaiim temkal=eradu maneya nivēśanamumam Kali-dēva-
svāmiya sthān-āchā[ryya Vā]-

23 maśakti-panditarggo kāl-garchchi dharā-pūrvvakam mādi sarvva-namaśya(sya)-
sarvva-bādhā-parihāram=[āgi]-

24 y=Udayama-Gāvumdamn=ā-chamdra-sthāyiy=āgi bitta dharmma || Ī dharmmamam
pratipāli[si]-

25 davarggo Gamge Vāranāsi Kurukshētra Prayāgey=emba punya-tīrttha-sthānamgalol
sāsira kavi[le]-

26 ya kōdum kolagumam pañcha-ratnadol=kattisi vēda-pāragar=appa   mahā-brāh-
manargge dānam-geyda [pha]-

27 la Ī dharmmaman=alidavarggey=ā sās[i*]ra · kaviley[u*]man=ā vēda-pāragar=appa
mahā-brāhmana[ru]-

28 mam ēl-kōṭi tapōdhanaruman=ā punya-tīrttha-sthānamgalol=konda mahā-pātakan=
akku || ⊚

29 Sva-datt[ā*]m para-datt[ā*]m vā yam(yō) harēti(ta) vasumdharā[m*] shashtir=
vinsha-shāsani⁸ vi=

30 shṭa(shṭhā)yām jāyato krimi⁴ [5*] ⊚ ⊚

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¹ The syllable *ma* is metrically superfluous   ² Apparently so, but the first *ka* may be read as *ra* or *ga*.
⁸ Read *varsha-sahasrāni*.   ⁴ Read *krimiḥ*.

TRANSLATION.

(Verse 1) Homage to Śambhu charming with the yak-tail fan which is the moon kissing his lofty head, the foundation-column for the construction of the city of the three worlds

(Lines 2-4) While the victorious reign of—hail!—the refuge of the whole world, favourite of Fortune and Earth, great Emperor, supreme Lord, supreme Master, ornament of Satyāśraya's race, embellishment of the Chālukyas, king Tribhuvanamalla, was advancing in a course of successively increasing prosperity, (to endure) as long as moon, sun, and stars —

(Lines 4-13) While he who finds sustenance at his lotus-feet,—hail!—the Mahāmandaleśvara Jayakēśi-dēva, who is decorated with the whole series of titles of honour, to wit, " the noble scion of the Trilōchana-Kadamba lineage sprung from Hara and the Earth which is praised over the whole world, great august sun rising upon the peaks of the Lord of Mountains, fascinating the whole circle of the earth by peculiar majesty exceedingly intense as the sun's rays, having for crest a stately lion, having a banner (bearing the device) of a great ape ; who is (saluted) with the noise of permatti drums and (other) musical instruments, who is sprung from the race presiding over eighty-four cities and consecrated in the consecratory rites of eighteen horse-sacrifices, who has established the puissance of his might upon the massive summits of the Lord of Mountains, the Himavat, a jhampalāchārya surpassing the world in bounty, a Rāma in intrepidity, a touchstone for the gold of warriors, an adamant castle for seekers of protection, a unique tree of desire for the world, white (of fame) as the time of conjunction[1], a Nārāyana incarnate, a sun of glory, a frontal fillet of feudatory princes, a grindstone to foes, a crest-jewel of warrior kings, a crest-gem of the Kādambas," and the Senior Queen Malāla-mahādēvi, were reigning with enjoyment of pleasant conversations —

(Verse 2) If any, being hungry, should come and ask for food, Vāmaśakti Pandita-dēva will gladly give to him rice without saying nay, so that the whole earth praises (him)

(Verse 3) Of Malla Gāvunda, who is pleasant of speech, a celestial tree to panegyrists and dependents, the eldest son is Uday'mma Gāvunda, who is sage, devoted to Hara, a right noble man on earth

(Verse 4) Like a thunderbolt on occasions when hosts of foes assail (him), like a celestial tree on occasions when he makes gifts to suitors, devoted to Mrida like Bāna, is Udayama Gāvunda on earth

(Lines 17-24) Hail ! On Sunday, the 5th day of the bright fortnight of Āshādha in the cyclic year Krōdhi, the 49th (year) of the Chālukya-Vikrama era, in the presence of the Sixteen Gāvundus of the great city of Kundūr (and) the establishment of the Five Maṭhas, Udayama Gāvunda, son of the Ākarika(?) Malla Gāvunda of Eranigereyahalli, having laved the feet of Vāmaśakti Pandita, Āchārya of the establishment of Kali-dēva-svāmi, with pouring of water granted for as long as the moon shall endure a pious foundation on sarvanamasya tenure, immune from all conflicting claims, (comprising) a gravel-field of one mattar west of the village (and) east of the stone-heap, and a paddy-field of one hundred kamma at the eastern corner of the Konnasagere used by the town, and two dwelling-houses south of (the sanctuary of) the god

(Lines 24-28 a prose formula of the usual type)

(Verse 5 a common Sanskrit verse)

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[1] Cf divālichara-dhavalam, above, Vol XII, p 269, The phrase probably refers to the Dīpāvali or Diwāli festival, from Asvina kr 14 to Kārttika su 2

No 10—ARASIBIDI INSCRIPTION OF THE REIGN OF SOMESVARA I SAKA 969
By Lionel D Barnett.

Arasībīdi, the ancient Vikramapura, is a decayed village in the Hungund *tāluka* of Bijāpūr District, situate in lat. 15° 54' and long 75° 58' (cf *Ind. Ant*, Vol 30, p 260)   Its name is written as *Arsubidda* on the Indian Atlas sheet 58 and the Hyderabad Survey sheet 30   In the local temple known as the Sūlegudi was found a broken tablet containing the present record, an ink-impression was prepared for the late Dr. Fleet, which is now in the British Museum, and from it I now edit the text

The upper part of the stone is decorated with some sculpture   Immediately over the inscribed area, on a plinth, is a figure of a squatting Jina, with a cow and sucking calf on his proper left, between two columns, and above this is a series of architectural divisions culminating in a vase-shaped *sikhara*   The inscribed area below is about 2 ft 2¼ in broad and 2 ft 2 in. high, but a line or two at the bottom is lost.—The character is a fair Kanarese of the period, the letters vary from ½ in. to ⅝ in. in height.   The *ri* of *rishiyargga*[m*] in l 8 is denoted by a modified *ri* with a tail attached ⟨glyph⟩ —The language is Old Kanarese prose, except for the Sanskrit verse-formula of which the first two letters appear on l 22   The archaic *ḷ* is changed to *l*, except in *eppattara* (l 12, for *ēḷp°*, through *ērpp°*)   The word *sarugi* (l 7) is of some lexical interest

The record, after referring itself to the reign of Trailōkyamalla-dēva, i e Sōmēśvara I (ll. 1-4), relates that Akkā-dēvi, while in the camp around the fortress of Gōkāge,[1] made a grant of lands to the Gonada-bedangi[2] Jain temple at Vikramapura, for the maintenance of the establishment and of the attached friars and nuns, among whom special mention is made of Nāgasēna Pandita of the Hogari[3] Gachchha of the Vaiasēna Gaṇa of the Mūla Sangha (ll. 4-9)   The rest of the inscription is taken up with the details of the endowment, among these we learn that some of the land was purchased from Dadigarasa (l 17), who was very possibly a member of the Bappura family which has left a record of its history in the Sūdi inscription no. K. (above, Vol. XV, p 106, cf *Ind Ant*, Vol XXX, p 266)

The date is given on ll 9-11 as Śaka 969, the cyclic year Sarvajit, the new-moon of Chaitra, a Sunday, an eclipse of the sun   These details are perfectly regular   The given *tithi* corresponded to Sunday, 29 March, A D 1047, on which day it ended 6 h 14 m after mean sunrise[4]   On the same day, at 5 h 51 m after mean sunrise, there was an eclipse of the sun (*Indian Calendar*, p 121)

The following place names are mentioned   Gōkāge (l 6), Vikramapura (ll 6, 13), the Kisukādu Seventy (ll 11-12), Gānada Hālūr (l 12), Muruvadina Pālu (l 13), Rāyagatte (l 15), the tank of Kappadi (l 18), Benares (l 19)   Gōkāge is the modern Gōkāk, the headquarters of the Gōkāk *tāluka*, in Belgaum District, situate in 16° 10' lat and 74° 49' long.   Vikramapura is Arasībīdi (see above)   On Kisukādu see *Ind Ant.*, Vol XXX, p 259   Gānada Hālūr is given on the Indian Atlas as " Ganuduhal," about 3 miles S E of Arasībīdi in lat. 15° 52½' and long. 76° 1' (cf *ibi l*, p 261)   The other local names I cannot trace

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[1] See *Dyn Kan Distr*, pp 435, 439   Dr Fleet understood the words *sutt irdda* to mean " besieging," which is possible, but not necessary

[2] This title is evidently derived from Akkā dēvi's title *gunada bedangiyar*, and shows that the temple was under her especial patronage

[3] This name occurs also, in the older form *Pogari*, in *Ind Ant*, Vol XIX, p 272, and *Ep Carn* VII i, Sk

124

[4] I have to thank Mr R Sewell for his kindness in verifying my calculations

TEXT.[1]

1   Svasti   samasta-bhuvan-āśraya   Śrī-Pṛthvī-vallabha   mahārājādhirāja
    paramēśvara-pa-

2   ramabhattāraka   Satyāśraya-kula-tilaka   Chāluky-ābharaṇa   śrīma[t*]-Trailōkyama-

3   lla-dēvara   vijaya-rājyam=uttarōttar-ābhivṛi(ʼṛi)ddhi-pravarddhamānam=ā-chamdr-
    ārkka-tā-

4   ram-baram   saluttam-ire   [|*]   Svasti   ari-nrī(nṛi)pa-makuta-ghatita[2]-charaṇ-ūravī-
    (vi)mdeyar=Ggamgā-snāna-

5   pavitreyar=ddīn-ānātha-chi(chi)ntāmaṇigal=ēka-vākje[ya*]r=ggunada   bedamgiʲr=appa
    śrīmad-A-

6   kkā-dēvi[ya*]r   Gōkāgeya   kōteya   vu(su)tt-irdda   bidinalu   Vikramapurada
    Goṇada-bedamgiya

7   Jin-ālayakke   khaṇḍa-sphutita-sudhā-kaimmakkam   gandha-dhūpa-dīpakkam
    sarugiga[m]   Mūla-samga(gha)-

8   Va[ra*]sēna-gaṇada   Hogariya   gachchhada   Nāgasēna-panditargga[m*]   all=irppa
    ṛishiyargga[m*]   ajjiya-

9   rgga[m*]   āhāra-dānakkam   ajjiyara   kappadak[k*]am   kuduva   bhūmi   Sa(śa)ka-
    varsha   969   neya

10 Sarvvajit-samvatsarada   Chaim(chai)trad=amāsye   Ādityavāradamdina   sūryya-gra-

11 haṇa-nimittam   dhārā-pūrvvakam   mādi   nagaradh(d)=anubhavaṇe(ne ?)   mukhyam=
    āgi   Kisu-

12 kād=eppattaṛa   baliya   sarvva-namasyam=āgi   bitta   bādam   Gānada   Hālūr=omdu

13 Vikramapurada   yīśānyada   des[e*]y[im*]   tōmtam   mattar=omdu   ūrim   temka
    Muṛuvadina   pā-

14 la   nairityada   deseyim   pandita-Nāgadēvamge   sarvva-namasya   martta[3]   pamn-
    neradu   allim   temka

15 paṛekāṛa   Kētōjamge   sarvva-namasya   mattar=irppatta-nālku   ūrim   badaga   Rāya-
    gaṭṭeyim

16 mūda   paṛekāṛa   Kētōjamge   tōmta   mattar=omdu   allim   paduva   kalkutiga
    Sūrōjamge   sa-

17 rbba-namasyam   mattaru   panneradu   tōmṭa   mattar=omdu   Dadigarasana   kayyalu
    māṛu-goṇdu   dēvargge   kot[ta]

18 bhūmi   Kappadiya   keṛeyim   temka   manneya-v[o]ladalu   sarvva-namasya   mattaru
    50   [||*]

19 I(i)   dharmmamam   sva-dharmmadim   rakshishi(si)davar   Vāraṇāsiyalu   ondu   kōti
    kavileyu-

20 mam   vēda-pālanar=appa   br[ā*]hmanamge   koṭṭa   pha[la]mam   paḍevar   I(i)
    dharmmaman=ahidava-

21 r   ā   sthānadol=anitu   kavileyuman=anirpe(tu)   brāhmaṇar[umam . . . .]
22 sā* ‖ Sāmā[nyō=yam . . . .]

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[1] From the ink-impression
[2] The engraver has written *ghata*, and added *ti* in smaller script under the line.   [3] Read *mattar*.

TRANSLATION.

(Lines 1-4) While the victorious reign of—hail !—the asylum of the whole world, favourite of Fortune and Earth, great Emperor, supreme Lord, supreme Master, ornament of Satyāśraya's race, embellishment of the Chālukyas, king Trailōkyamalla, was advancing in a course of successively increasing prosperity, (to endure) as long as moon, sun, and stars —

(Lines 4-9.) Hail ! she whose foot-lotuses are touched by the diadems of opponent kings, who is pure through bathing in the Ganges, a wishing-jewel to the distressed and master-less, uniform in speech, adorned with virtues, Akkā-dēvi, in the camp around the fortress of Gōkāge, granted land for (the expenses of) plastering the broken and burst (masonry) of the Goṇada-bedaṅgi Jina temple at Vikramapura, and for (the supply of) scent, incense, and lamps, and for sarugi,[1] and for the maintenance of Nāgasēna Pandita, (a friar) of the Hogariya Gachchha of the Varasēna Gana of the Mūla Sangha, and of the friars and nuns residing there and for the cloaks of the nuns —

(Lines 9-18) The lands given (by her) to the god, which she purchased of Dadigarasa, on Sunday, the new-moon day of Chaitra in the cyclic year Sarvvajit, the 969th (year) of the Śaka era, on the occasion of an eclipse of the sun, with the performance of pouring of water, were · Gāṇada Hālūr, a town forming part of the Kisukādu Seventy, granted on sarva-namasya tenure, in its entirety,[2] with usufruct of the citizens (?), one mattar of garden on the north-east of Vikramapura, south of the town, on the south-west of the Muruvadu Waste-land, twelve mattar on sarva-namasya tenure for Paṇḍita Nāgadēva; to the south thereof, twenty-four mattar on sarva-namasya tenure for the drummer Kētōja; north of the town, east of Rāyagaṭṭe, one mattar of garden for the drummer Kētōja; on the west thereof twelve mattar on sarva-namasya tenure (and) one mattar of garden for the stone-mason Sūrōja, (furthermore,) 50 mattar on sarva-namasya tenure in the estate of the seigniory south of the Kappadi tank.

(Lines 19-21   a prose formula of the usual type.)

(Line 22 · the beginning of a common Sanskrit verse.)

No 11—THE BRAHMA-SIDDHANTA OF BRAHMAGUPTA (A.D 628)

WORKING TABLES FOR COMPUTATION OF ANCIENT DATES BY THE TRUE, OR APPARENT, MOTIONS OF SUN AND MOON

BY ROBERT SEWELL (I C S, RETIRED)

A continuation of the author's "Indian Chronography"

311. In para 257 of my article on "*The true longitude of the sun in Hindu astronomy, the Siddhānta-Śirōmani*" (above, *Vol. XIV, p 241*), and again in a later article on *The Siddhānta-Śirōmani*, § 271](Vol. XV, pp 159 sqq), I discussed the question of the values assigned in the seventh century A.D. by Brahmagupta to the twenty-four base-sines of angles in the quadrant, and expressed the opinion that when, but not until, definite assurance was obtainable that the values stated in the only available copies of the *Brahma-Siddhānta* were[3] really those fixed by its author, working Tables framed according to its postulates might safely be prepared for the computation of ancient dates.

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[1] This term occurs elsewhere, e g in *Ep. Carn.* II (*Sravana Belgola*), No 56, p 52.
[2] Literally, "one."
[3] One MS. copy in the India Office, London, and Benares printed edition

In response to my appeal Mr G R Kaye (Curator, Board of Education, Simla) has been kind enough to assist me He tells me that there can be no doubt but that the values given for the several base-sines in the edition of the *Brahma-Siddhānta*, printed and published in Benares, are correct, and that Brahmagupta certainly made his calculations with a radius (sin 90°) of 3270', discarding that of 3438', which seemingly had been in use in India since the time of the Greeks [1] Mr Kaye went fully into the subject in a very learned article, "*Ancient Hindu Spherical Astronomy*" published in the *Journal of the Asiatic Society of Bengal* in 1919 (*New Series, Vol XV, No 3*), which contains (*Table 8, p 187*) a list of the sine values as determined by the authors of the *Paulisa-, Arya-,* and *Brahma-Siddhāntas* He points out that, when properly applied, the equations of the sun's and moon's centres obtained from the sine-values of Brahmagupta agree with those derived from the values assigned by the other authorities

Accordingly I have prepared the Table of Brahmagupta's sines and resulting base-equations of the sun's centre (*Table LXXXIX below*), and a comparison between these and the equations of the *Siddhānta-Siromani* (*Table XLVII above, Vol XIV, col. 9, and Prof Jacobi's Tables, XXIVB above Vol I*) proves that there is only a very trifling difference whether we use Brahmagupta's, or the older —and later —sine-values By the *Siddhānta-Siromani*, with radius 3438', the sun's greatest equation that of 90°, =2° 10' 31", exact By the *Brahma-Siddhānta*, with radius 3270', it=2° 10 31" 19 We may therefore safely use Table LXXXIX (*below*)[2] and Table LIX (*above, Vol XV*) for the sun's and moon's equations by the *Brahma-Siddhānta*

312 The *Brahma-Siddhānta* was composed by Brahmagupta in A D 628 and is said to have been extensively used in some parts of India, its principal rival being the *Arya-Siddhānta* of Āryabhata, known in later years as the *Laghu-Arya* to distinguish it from the *Mahā-Arya-Siddhānta* of the tenth century This last, called also the *Second Arya-Siddhānta*, seems to have had no great following The *Rājamrigānka*, an astronomical work of A D 1042 introduced, according to the information available to the late Sankara Bālkrishna Dikshit, some important changes into the system of Brahmagupta, but unfortunately no complete copy of it has yet been obtained, and the necessary particulars are not to be found in those fragments which have come to light It is not possible therefore to frame any accurate Tables for calculation by the *Rājamrigānka*, and we must rest satisfied with the assurance of Mr S B Dikshit[3] that the *Siddhānta-Siromani* is the same as the *Rājamrigānka* in the matter of calculation of a *panchāng* Tables for use by the former have already been published by me, comprising the period A D 1100-1750 (*above, Vol XV*)

All the authorities appear to arrive at similar or almost similar results in their computation of the lunar tithis, when worked by the true or apparent motions of sun and moon, but, since they differ in their estimate of the position of the sun's apsis at a given date, they necessarily differ somewhat in their estimate of the moment in each year when the true sun reaches long 0°, the moment, that is, of "true Mêsha-samkrānti" This difference leads to differences in the lengths of the true solar months, and consequently to differences in the intercalation and suppression of true lunar months, which differences, again, occasionally cause differences of a whole lunar month in the beginning of the luni-solar year and differences in the names of some of the lunar months therein

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[1] It would be interesting to learn his reason for the change Later Indian astronomers reverted to the radius of 3438', which is correct With $\pi=3\ 14159$ the radius=3437 74967 Brahmagupta's radius 3270 implies a ratio $\pi=3\ 303$ The ratio according to Archimedes (B C 250) was 3 14286 The ratio 1 √10 mentioned in the *Sūrya-Siddhānta*=3 16228

[2] Or Table XLVII (*above, Vol XIV*), col 9, also Professor Jacobi's Tables XXIVA, XXIVB (*Vol. I*).

[3] *Indian Calendar*, p 8

But we are now better able to deal with these matters than before   Dates can be easily computed by the true motions of sun and moon according to the *Sūrya-Siddhānta* for the whole historical period from A D 300 to 1900 (*Indian Calendar*)[1], according to the *Ārya-Siddhānta* from A D. 900 downwards (*above, Vol XVI*), according to the *Brahma-Siddhānta (the present paper)* from A D 600 to 1200, and according to the *Siddhānta-Śiromani*, *Rājamrigānka* and other works of the time of Bhāskarāchārya from A D 1100 to 1750 (*above, Vol XV*), these periods comprising the outside limits of use.

And, as regards computation by the mean motions of sun and moon, which system is believed to have been in universal use down to about A D 1100, and perhaps in some places to a considerably later date, we now have Tables for work by the *Ārya-Siddhānta* from A D 500 to 1400 (*above, Vol XVII*), while I hope to be able to publish here after a set of similar Tables for the *Brahma-Siddhānta*, also embracing the outside period of use

All these Tables are framed on the same system, so as to enable calculation to be made as easily and rapidly as possible

Elements of the Brahma-Siddhānta

313 (i) The length of the mean solar sidereal year is 365 2584375 days, or 365^d 6^h 12^m 9^s The *Siddhānta-Śiromani* adhered to this estimate

(ii) Brahmagupta's sines of angles of the quadrant differ from those of the other authorities   His sine of 90°, the radius, = 3270' instead of 3438'   His sine of 3° 45' = 214' instead of 225'   The 24 base-sines are given in Table LXXXIX below

(iii) The equations, however, which are based on these sine-values are practically the same as those of the *Siddhānta-Śiromani* (*compare Table XLVII above, Vol XIV, col 9, and Table LXXXIX below*)   Tables LV, LVI, LIX (*above, Vol XV*) may be therefore used as well for the *Brahma-Siddhānta* as for the *Siddhānta-Śiromani*

(iv) The greatest equation of the sun's centre, that of 90°, is, in 10,000ths of the circle, 60 425925   The greatest equation of the moon's centre is, in similar measurement, 139 858101852   The sum of the two is 200 284027.

(v) The epoch of the Kaliyuga era was mean sunrise, taken as 6 A M , on Friday, 18 February, B C 3102, that moment being 0^h 0^m 0^s Lankā time   This was the moment of mean Mēsha-samkrānti, when the mean sun's centre reached long. 0°   True Mēsha-samkrānti, when the true sun's centre reached long 0°, occurred on Tuesday, 15 February, B C. 3102, at 19^h 52^m 21^s 5 after mean sunrise at Lankā

(vi) The circumference of the sun's epicycle is 13° 40', that of the moon 31° 46'   The epicycles are not contracted at any point.   In this the *Siddhānta-Śiromani* concurs (*Jacobi, Vol I above, p 441*)

(vii) The line of apsides of the sun's orbit has a constant forward shift, the perigee-point (on the longitude of which my calculations are based) moving 0" 144 per ann , or 14" 4 in a century   According to the *Siddhānta-Śiromani* the movement is more rapid, amounting to 1" 044 per ann (*Jacobi, op. cit*).

(viii) The *sōdhya*, or time-interval between true and mean Mēsha-samkrāntis, was, in K.Y 0 or at the epoch of the Kaliyuga era, according to Dr Schram,[2] 2^d 171971 or 2^d 4^h 7^m 38^s 5   With this the *Siddhānta-Śiromani* agrees   But in later years the *sōdhya*, as postulated by the two authorities, differs in value owing to the difference between the two *Siddhāntas* in their estimate of the movement of the sun's apsis   (*See vii above*)

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[1] Also by the *Indian Chronology* of Dewan Bahadur L D Swamikannu Pillai, M A , whose Tables are framed on a different system

[2] *Indian Chronography*, § 39 D, p 16

(ix) The position of the sun's apsis (perigee) at K.Y 0, the epoch of the Kaliyuga, was 257° 45' 36",[1] and his mean anomaly was 102° 14' 24", or, in 10,000ths of the circle, 284 0

(x) The position of the moon's apsis (perigee) at the same moment was 305° 29' 46"[2]; and her mean anom. was 54° 30' 14", or, in 1,000ths of circle, 151 399691358

(xi) The sun's mean velocity (he is treated as a planet) and the length of the mean solar year being the same both by the *Brahma-Siddhānta* and the *Siddhānta-Śirōmani*, his mean long. at any moment must be the same by both, and so also the length of the mean solar month But the two authorities are not in exact accord as to his true long and the length of the true solar month

Shift of sun's apsis   The śōdhya   Length of true solar year

314 The length of the mean solar year being the same, viz 365ᵈ 6ʰ 12ᵐ 9ˢ, by both the *Brahma-Siddhānta* and the *Siddhānta-Śirōmani*, the first portion of § 273 above (Vol XV) and accompanying Table A apply as well to the former as to the latter But for the latter portion that section and its Table B, the following must be substituted when dealing with the *Brahma-Siddhānta*, the two authorities not being in accord as concerns the matter in question

315 As stated above, the sun's perigee-point according to the *Brahma-Siddhānta* advances annually 0" 144 along the ecliptic, and in consequence of this shift the true sun's velocity at long 0" is a little greater every year than the year before, i e the true sun reaches long. 0°, or the moment of true Mēsha-samkrānti occurs, a little earlier each year   In every year there is a slight increase in the distance and time-difference (our śōdhya) between the mean and true suns at that point of the orbit   Dr Schram has carefully calculated the value of this śōdhya at the moment of true Mēsha-samkrānti at the beginning of several millenniums, and his results for the period embraced in my general working Table LXXXII are stated in the following Table B

TABLE B
VALUE OF ŚŌDHYA BY THE BRAHMA-SIDDHĀNTA

K Y year expired	A.D.	EXACT VALUE OF ŚŌDHYA AT BEGINNING OF CENTURIES				
		days and decimals.	d	h	m	s
3700	599-600	2 1729145	2	4	8	59 8128
3800	699-700	2 1729400	2	4	9	2 0160
3900	799 800	2 1729655	2	4	9	4 2192
4000	899 900	2 1729910	2	4	9	6 4224
4100	999 1000	2 1730165	2	4	9	8 6256
4200	1099-1100	2 1730420	2	4	9	10 8288
4300	1199 1200	2 1730675	2	4	9	13 0320

One result of this shift of apsis is that, by the *Brahma-Siddhānta*, the true sun reaches the 0° point of long. 0ˢ 022032 earlier every year than the year before, and in consequence the length of the true solar year, or the time needed for the true sun to travel from true Mēsha-samkrānti

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[1] Jacobi, above, Vol I, p 442, § 83, where he gives the place of the apsis (apogee) as 77° 45' 36". See also E. Burgess's " Sūrya-Siddhānta "

[2] Moon's apogee given by Jacobi as 125° 29' 46".

in one year to true Mēsha-samkrānti in the next, is (365^d 6^h 12^m 9^s—0^s 022032) 365^d 6^h 12^m 8^s 977968 [The exact moment of true Mēsha-samkrānti in each year from A D 599 to 1200 is given in the general Table LXXXII below, cols 13-17. It can be tested by the use of Table A, § 273, referred to above, and Table B here given, using the "longer rule" stated in § 273 or in *Indian Chronography*, p 61]

Another result of the shift is that the sun's mean anomaly, or the mean sun's distance from the sun's perigee-point, decreases every year by 0″ 144 or 14″ 4 in a century Reckoning in 1,000ths of circle for valuation of our c (sun's mean anom) in the Tables, 14″ 4 = 0 01 The value of c therefore decreases 0 01 in a century, and this decrease has to be taken into account from K.Y. 0, the epoch of the Kaliyuga This has been done in the preparation of the Tables which follow

The increase of a, b, c, in centuries, years, days and fractions of days.

316 Following on what has been stated, we learn that Tables LIVA and B, which deal with the periodical increases of a, b and c according to the *Siddhānta-Śirōmani*, may safely be used for calculation by the *Brahma-Siddhānta*, with the one reservation as to the increase of c in a century a being the distance of mean moon from mean sun, and the *longitude* of the mean sun not being affected by the shift of apsis, but only his *mean anom* , or distance from the point of the apsis, it appears that the rate of increase of a must be same by both authorities.

As to the rate of increase of c it is, by the *Siddhānta-Śirōmani*, centennially less by 0 0805 (§ 273 above), and this was taken into account in the preparation of the heading of Table LIVA, where a footnote is appended shewing what the rate of increase would be per century if no such deduction had been made   This rate is, in thousandths of a circle, 997 690008075 in a century of 36525 days, and 0 427795618 in a century of 36526 days By the *Brahma-Siddhānta*, the centennial decrease in the sun's mean anomaly being 0 01, the amount of increase of c per century is, for a century of 36525 days, 997 678896964, and for a century of 36526 days is 0 416684507. The difference between the two authorities in shorter periods may be ignored except in some extraordinarily close case   If it is ever needed, the increase in c in one year may be reduced by 0 0001 from the Table quantity

Otherwise Tables LIVA and B stand good for calculations by the *Brahma-Siddhānta*.

The values of a, b, c at the beginning of K Y 3700

317 The general Table LXXXII below begins from the beginning of K Y 3700 expired. Table LXXXVI states the value of a, b, c at that moment, and at the similar moment at the beginning of subsequent centuries   It is necessary therefore to explain how these figures were calculated.

(1) *The value of a (distance of mean moon from mean sun) in K Y 3700* According to Hindu astronomers mean moon and mean sun were in conjunction at the moment of mean Mēsha-samkrānti in K.Y 0, the epoch of the Kaliyuga, or, in other words, at that moment $a = 0$ In the 37 succeeding centuries there were 32 common and 5 defective centuries   Taking the century values of a given in the heading of Table LIVA and multiplying for 32 common and 5 defective centuries, we arrive at the figure 6567 108945284 as the value of a at the beginning of the 37th century K Y., whole revolutions of 10,000 each being omitted   From this figure has to be deducted,—according to the working system of the *Indian Calendar*, which follows Largeteau and Jacobi,—the sum of the greatest equations of sun and moon, viz 200 284027 (*above § 313, iv*) This gives us the value of a at the beginning of K Y 3700 (expired) as 6366 824917506 [1]

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[1] Professor Jacobi differs by about 17 units He gives the figure 6384·0 (*Vol XI above, p 167, Table IXA*) I can give no explanation of the reason for this, and can only state fully, as in the text, my bases of calculation.

Now this value stands for mean sunrise of Sunday, 22 March, A D 599, *i c*, for the sunrise succeeding the moment of occurrence of mean Mīsh ī-saṁkrānti in K Y 3700, but in all my Tables the calculation is for mean sunrise on the actual day of that occurrence, and we have therefore to deduct one day's value of *a* (viz 333 631985412—Table LIVA above) from the above estimate This done, we have, for mean sunrise on Saturday, $a = 6028\ 192932091$

(ii) *The value of* b (*moon's mean anom*) *at the same moment* At the *epoch* of the Kaliyuga the moon's mean anom was, as stated above (§ *313, x*). in 1,000ths of a circle, 151 399691358 Using the century figures of *b* in the heading of Table LIVA, and multiplying for 32 common and 5 defective centuries, it is found that, excluding whole revolutions of 1,000 each, the result is 604 144838202 Adding the value of *b* at K Y 0, as above, we have at beginning of K.Y 3700, for the value of *b*, 755 544529560 [1] But this (*see above,* i) was its value at mean sunrise on Sunday, 22 March, A D 599 Deducting one day's value of *b* (36 291649786) the fixture for mean sunrise on Saturday, 21 March, amounts to 719 252579774

(iii) *The value of* c (*the sun's mean anom*) *at the same moment* The correct increase of *c* by the *Brahma-Siddhānta* in centuries of 36525 and 36526 days has been given above in the latter part of § 316 Multiplying those quantities for 32 common and 5 defective centuries, and discarding whole revolutions of 1,000 each, we arrive at the increase, after 37 centuries, of 1 728389044 To this has to be added the value of *c* at K Y 0 (*above,* § *313, xi*), viz 254 0 The value of *c*, therefore, at mean sunrise of Sunday 22 March, A D 599, was 285 728389044 [2] Deducting the *c* for one day (2 737787543) we have finally, for mean sunrise on Saturday, 21 March, *c*=282 990601501

The entries, therefore, for the aforesaid Saturday of K Y 3700 in Table LXXXVI below are

$$a = 6028\ 1929$$
$$b = 719\ 2529$$
$$c = 282\ 9906$$

The rest of that Table follows by addition of the proper century values

Duration of true solar months

318 It has been mentioned above (§ *313, xi*) that, while the length of the mean solar month must be the same both by the *Brahma-Siddhānta* and the *Siddhānta-Śiromani*, the lengths of the true solar months according to the two authorities differ because of their different estimate of the shift of the sun's apsis Thus in K Y 4000, the middle year of my general Table LXXXII below, the sun's perigee-point according to the *Siddhānta-Śiromani* was at long 258° 55' 12", while by the *Brahma-Siddhānta* it was at long 257° 55' 12' Hence the velocity of the true sun (he is always considered as a planet) at the several true solar *samkrāntis*, when the true sun's centre enters the several signs, is not the same by the two authorities quoted And this has necessitated the preparation of a new Table (*LXXXIIIA below*), giving the lengths of the true solar months and increase of *a*, *b*, *c* therein individually and collectively according to the *Brahma-Siddhānta*

There being in K Y 4900 a difference of only 4' 48" between the positions of the sun's perigee, as estimated by the *Brahma-Siddhānta* and by the *First Ārya-Siddhānta*, the former placing it at 257° 55' 12" and the latter at 258°, it was considered sufficiently safe to use Table XLIX (*above, Vol XIV*) for the true sun's velocity at different points of his orbit in hours and minutes, and Table L-A for seconds His true long at each *samkrānti* was computed from his known mean longitude + the equation of the centre, which was calculated in each case

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[1] Professor Jacobi's figure for this is 758 1, in my notation, against my 755 5
[2] This agrees with Professor Jacobi's fixture, which, measured from perigee and in my notation, is 285·7.

Thus was obtained the length of each month in days, hours, etc. For the increase of a, b, c during the periods so determined Tables LIVA and B, which are applicable to the *Brahma-Siddhānta* as well as to the *Siddhānta-Siromani*, were used.

Note on work for the nakshatra

319. In our method of work $s =$ the true sun's longitude and $t =$ the *tithi*-index (which shews the true moon's distance from the true sun) at the given moment $s + t =$ the *nakshatra*-index n, which gives the true moon's place in the heavens, or her apparent longitude   The value of t is ascertained by the ordinary calculation for a date   The value of s has to be found.

By the *Árya-Siddhānta* the formula for finding s, c being the sun's mean anom. at the given moment, is $s = (c \times 10) + 7226 -$ eqn. c , where the factor 7226, which represents in 10,000ths of circle the long of sun's perigee *plus* the sun's greatest equation, is a constant [1]

By the *Sūrya-Siddhānta*, as exemplified in the *Indian Calendar* Tables, the numerical factor is not 7226, but varies in the period A.D 900 to 1900 from 7206 5077 to 7207 4035 being fixed for rough work at 7207. The variation is due to the postulated shift of the sun's perigee-point.

By the *Siddhānta-Siromani* there is, for the same reason, a variation in the numerical factor, *viz.* from 7252 6466 in A.D. 900 to 7259·0910 in A.D. 1700,—roughly from 7253 to 7259.

By the *Brahma-Siddhānta* the numerical factor varies from 7224 5370 in A D. 600 to 7225·2037 in A D. 1200 (the limits of the general Table LXXXII below) For rough work therefore by this authority the formula is $s = (c \times 10) + 7225 -$ eqn c

For more accurate work the value of c should be calculated (by the Tables) with decimals, and instead of multiplying c by 10 its value should be changed from thousandths of circle (as in the Table-result) to ten thousandths by moving the decimal point one place to the right [2] ; the value of eqn c can be obtained from Table LVI with great accuracy , and the numerical factor can be taken from the following summary.

K.Y century.	A D century	Exact factor in formula	Roughly.
3700	599 600	7224·5370	
3800	699-700	7224·6481	
3900	799-800	7224 7592	
4000	899 900	7224·8703	7225
4100	999-1000	7224 9814	
4200	1099-1100	7225·0926	
4300	1199-1200	7225 2037	

Examples.

It is not necessary to give a number of examples of work by the present Tables   The system of calculation being exactly the same as that of the *Indian Calendar* and throughout the present series of articles, the examples already published for computation by other authorities

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[1] See *Indian Calendar*, § 156 p 97 , article on the *Siddhānta-Siromani*, above, Vol XV, § 273, " *Note on work for the nakshatra* ", article on the *First Árya-Siddhānta*, Vol XV above, § 302 , and the several examples given in those papers

[2] Whole revolutions are not necessary for present purposes, and in our system when $a = 10,000$ a whole synodic revolution of the mean moon has been completed

will suffice, *the proper Tables being used*, for work by the *Brahma-Siddhānta*. These Tables are specified in the following pages.

Examples have been given in all my foregoing papers, but perhaps the fullest series is to be found in the article on the *First Ārya-Siddhānta* (*above, Vol XVI*).

Tables for calculation by the Brahma-Siddhānta

The system of work for computation of an Indian date will be readily understood by perusal of examples 2 to 11 appended to my paper (*above, Vol XVI*) on the *First Ārya-Siddhānta*, but the Tables used are of course not all the same. The following list shews how accurate results by the *Brahma-Siddhānta* are to be obtained in calculation by the movements of true sun and true moon

Table LXXXII below is the general working Table for the *Brahma-Siddhānta* for the period A D 599 to 1200 (K Y. 3700 to 4300 expired).

For names of months and of nakshatras in different parts of India, see Table LXII above (*Vol XVI, " The First Ārya-Siddhānta "*).

For collective duration of mean lunar months see Table LXIIIA of the same article, or Table III, Part I, *Indian Calendar*

Table LXXXIIIA below gives, by the *Brahma-Siddhānta*, the length of the true solar months and their collective duration, with the corresponding increases of *a, b, c*

Table LXXXIIIB states the exact value of *c* and of " equation *c* " at the several true *samkrāntis*, or moments of the true sun's centre reaching the several signs

Table LXXXIIIC shews the value of *c* and of " equation *c* " at the beginning of each century of the Kaliyuga

For the increase of *a, b, c* respectively in defective and common centuries, and in common years and Leap-years, see Table LIVA, heading, but note that by the *Brahma-Siddhānta* the increase of *c* in a defective century of 36525 days is 9°7 678896964 and in a common century of 36526 days is 0 416684507 Tables LIVA and B contain the necessary figures for days, hours, minutes and seconds

Table LXXXIV gives the values of " equation *b*," and Table LXXXV those of " equation *c*," for easy calculation by whole numbers, corresponding respectively to Tables VI and VII of the " *Indian Calendar*," which stand for the *Sūrya-Siddhānta*

For the more detailed values of " equation *b* " and " equation *c* " of moon and sun use Tables LV and LVI above, Vol XV, as framed for the *Siddhānta-Śiromani*

For the indices of *tithis* (*t*), karanas, yōgas (*y*) and *nakshatras* (*n*) see Table VIII, " *Indian Calendar*," or Table LXVIII (*above, Vol XVI, " The First Ārya-Siddhānta "*)

For serial numbers of days of a year reckoned from January 1st use Table IX, " *Indian Calendar*," or Table LXIX (*above, Vol XVI, " The First Ārya-Siddhānta "*)

For conversion of *tithi*-indices and *tithi*-parts into time Table X, " *Indian Calendar*," is to be used, or Table LXX (*above, Vol XVI, " The First Ārya-Siddhānta "*)

For finding the week-day according to the European Calendar for any century from A D. 0 to 2300 see Table LXXI (*above, Vol XIV, " The First Ārya-Siddhānta "*), or Tables XLIA and B (*pp 176, 177, " Indian Chronography "*)

Table LXXXVI gives the values of *a, b, c* at the beginning of each century of the Kaliyuga by the *Brahma-Siddhānta*

Table LXXXVII gives the same for odd years of those centuries

Table LXXXVIII states the daily sunrise values of *a, b, c* for a month previous to the day of Mēsha-samkrānti

Table LXXXIX sets forth the 24 base-sines of angles of the quadrant according to Brahma-gupta, and the corresponding equations of the sun s centre

TABLE LXXXII

CONSTRUCTION OF TABLE

The Table is constructed on the lines of Table I of the *Indian Calendar* and is to be used in the same way   The columns are numbered similarly.

Col 7.   The *samvatsara*-name,—i e the name of the Jovian cycle—, of the year is given as determined by my previous calculations (*above, Vol XIII Table XLII*)   Entries in italics point to cases where this *samvatsara*-name differs from that given to the same year by *Sūrya-Siddhānta* reckoning.

Col 8.   Months noted in roman characters are intercalated (*adhika*) lunar months   Those in italics are suppressed (*kshaya*) months

Cols 13, 19.   Figures in brackets give the serial number of the day [measured from January 1st.

Col 23   *a*=distance, at mean sunrise, of mean moon from mean sun, or phase of moon stated in 10,000ths of circle, and reduced by the sum of the greatest equations of sun and moon so that calculation of the equations of *b* and *c* may always be additive.

Col. 24   *b*=mean anomaly of moon or mean moon's distance from perigee-point of apsis stated in 1,000ths of circle

Col. 25   *c*=mean anomaly of sun or mean sun's distance from perigee, stated in 1,000ths of circle.

REMARKS

A.D 629-630, *cols. 19, 20*   A very close case   The moment of true new moon was less than half a minute after mean sunrise at Lankā on Wednesday, 1st March   And the first *śukla tithi* of the year ended after mean sunrise on Thursday, 2nd March, which was therefore by rule the first civil day of the luni-solar year   If new moon had taken place more than half a minute earlier the first civil day of the year, " Chaitra sukla 1," would have been 1st March

A D 968-69, *col 8*   At the Kumbha *samkrānti* the true moon was waning.   The moment of the next, the Mīna, *samkrānti* occurred about 2½ minutes after the moment of true new moon, so that the true moon was waxing at the Mīna *samkrānti*   Hence the lunar month Phālguna was intercalated   According to the 19-year sequence we should have expected an intercalation of the lunar month Chaitra next following   The sequence shows similar irregularities when examined by other authorities, but only very rarely

A.D 974-75, *cols 19, 20*   Close case   The 1st true new moon after the Mīna *samkrānti* occurred 3 minutes before mean sunrise at Lankā on 25th February A D 974   That therefore was the day " Chaitra śukla 1."

A D 963-64, 982-83, *col 8*   In both these years an intercalation of the lunar month Śrāvana instead of Āshādha would have been more in accordance with the 19-year sequence, seeing that Śrāvana was the intercalated month in A D 1001 and 1020, but prior to A D 963 at intervals of 19 years there had been eight intercalations of Śrāvana, and towards the close of such a run a change of conditions generally becomes apparent

A.D. 1001-2, 1020-21, *col 8*   See the previous note   If in these two years the conditions had made necessary an intercalation of Āshādha, the 19-year sequence would have been uninterrupted

A.D 1128-29, *col 8*   By the *Brahma-Siddhānta* the intercalation of Phālguna was clearly demanded   See Remarks preceding Table LX (*above, Vol XV*), on the same year as worked by the *Siddhānta-Śiromani.*

TABLE

GENERAL TABLE FOR CALCULATION

Conforming to Table I " Indian Calendar "

(See notes on

					CONCURRENT YEAR			
						JOVIAN SAMVATSARA		Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months
Kali	Śaka.	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3701	522	657	6		599 600	50 Anala . .		
3702	523	658	7		*600 01	51 Pingala . .		3 Jyēshtha
3703	524	659	8		601 02	52 Kālayukta .		
3704	525	660	9		602 03	53 Siddhārthin .		{ 7 Āśvina 11 Māgha (*ksh*) }
3705	526	661	10		603 04	54 Raudra . .		1 Chaitra
3706	527	662	11		*604 05	55 Durmati .		
3707	528	663	12		605 06	56 Dundubhi .		5 Śrāvana .
3708	529	664	13		606 07	57 Rudhirōdgārin		
3709	530	665	14		607-08	58 Raktāksha .		..
3710	531	666	15		*608 09	59 Krōdhana .		4 Āshādha .
3711	532	667	16		609 10	60 Kshaya .		.
3712	533	668	17		610 11	1 Prabhava .		
3713	534	669	18		611-12	2 Vibhava		2 Vaiśākha
3714	535	670	19		*612-13	3 Śukla		
3715	536	671	20		613 14	5 Pramōda		6 Bhādrapada
3716	537	672	21		614 15	6 Prajāpati		
3717	538	673	22		615 16	6 Angirasa .		
3718	539	674	23		*616 17	7 Śrimukha .		4 Āshādha .
3719	540	675	24		617 18	8 Bhāvi .		.
3720	541	676	25		618 19	9 Yuvan .		
3721	542	677	26		619-20	10 Dhātri .		3 Jyēshtha .
3722	543	678	27		*620-21	11 Īśvara . .		.

LXXXII.

BY THE BRAHMA-SIDDHĀNTA

the columns being similarly numbered

preceding page)

COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali
Day and month A D	Week-day	Time of true Mīsha saṁkrānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
19 Mar (78)	5 Thur	1 6 0	3 Mar (62)	3 Tues	9932 8171	66 0032	233 7104	3701
18 Mar (78)	6 Fri	7 18 9	21 Feb (52)	1 Sun	147 1720	949 5390	205 6250	3702
18 Mar (77)	0 Sat .	13 30 18	11 Mar (70)	0 Sat	181 8544	885 5324	256 9354	3703
18 Mar (77)	1 Sun	19 42 27	28 Feb (59)	4 Wed	57 5772	732 7766	226 1121	3704
19 Mar (78)	3 Tues	1 54 36	18 Feb (49)	2 Mon	271 9320	616 3122	203 5023	3705
18 Mar (78)	4 Wed	8 6 45	7 Mar (67)	0 Sat	9967 9825	516 0140	246 5994	3706
18 Mar (77)	5 Thur	14 18 54	24 Feb (55)	4 Wed	9843 7052	363 2681	215 7762	3707
18 Mar (77)	6 Fri .	20 31 3	15 Mar (74)	3 Tues	9878 3876	299 1516	267 0865	3708
19 Mar (78)	1 Sun	2 43 12	4 Mar (63)	0 Sat .	9754 1105	146 4956	236 2624	3709
18 Mar (78)	2 Mon	8 55 21	22 Feb (53)	5 Thur	9968 4653	30 0312	208 1780	3710
18 Mar (77)	3 Tues	15 7 30	12 Mar (71)	4 Wed	3 1477	966 0247	259 4884	3711
18 Mar (77)	4 Wed.	21 19 39	2 Mar (61)	2 Mon	217 5025	849 5604	231 4029	3712
19 Mar (78)	6 Fri	3 31 48	19 Feb (50)	6 Fri	93 2254	696 8045	200 5797	3713
18 Mar (78)	0 Sat	9 43 57	9 Mar (69)	5 Thur	127 9077	632 7980	251 8902	3714
18 Mar (77)	1 Sun	15 56 6	26 Feb (57)	2 Mon	3 6306	480 0421	221 0869	3715
18 Mar (77)	2 Mon	22 8 15	16 Mar (75)	0 Sat	9999 6810	379 7440	269 6395	3716
19 Mar. (78)	4 Wed	4 20 24	6 Mar (65)	5 Thus	9914 0358	263 2795	241 5542	3717
18 Mar (78)	5 Thur	10 32 33	23 Feb (54)	2 Mon	9789 7587	110 5236	210 7310	3718
18 Mar (77)	6 Fri	16 44 42	13 Mar (72)	1 Sun	9824 4420	46 5171	262 0414	3719
18 Mar (77)	0 Sat	22 56 51	3 Mar (62)	6 Fri	38 7959	930 0528	233 9559	3720
19 Mar (78)	2 Mon	5 9 0	21 Feb (52)	4 Wed	253 1507	813 5885	205 8705	3721
18 Mar (78)	3 Tues	11 21 9	11 Mar (71)	3 Tues	287 8331	749 5820	257 1810	3722

						A D	Jovian Samvatsara		Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months
Kali	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam			Southern system	Northern system	
1	2	3	3a	4		5	6	7	8
3723	544	679	28			621-22	12 Bahudhānya		7 Āśvina
3724	545	680	29			622-23	13 Pramāthin		..
3725	546	681	30			623 24	14 Vikrama		
3726	547	682	31			*624 25	15 Vrisha		5 Śrāvaṇa
3727	548	683	32			625 26	16 Chitrabhānu		..
3728	549	684	33			626 27	17 Subhānu		..
3729	550	685	34			627-28	18 Tāraṇa		4 Āshādha
3730	551	686	35			*628-29	19 Pārthiva		
3731	552	687	36			629 30	20 Vyaya		
3732	553	688	37			630 31	21 Sarvajit		2 Vaiśākha
3733	554	689	38			631 32	22 Sarvadhārin		
3734	555	690	39			*632 33	23 Virōdhin		6 Bhādrapada
3735	556	691	40			633 34	24 Vikṛita		..
3736	557	692	41			634-35	25 Khara		
3737	558	693	42			635 36	26 Nandana		4 Āshādha
3738	559	694	43			*636 37	27 Vijaya		
3739	560	695	44			637-38	28 Jaya		
3740	561	696	45			638 39	29 Manmatha		3 Jyēshṭha
3741	562	697	46			639 40	30 Durmukha		
3742	563	698	47			*640 41	31 Hēmalamba		7 Āśvina
3743	564	699	48			641-42	32 Vilamba		
3744	565	700	49			642 43	33 Vikārin		
3745	566	701	50			643 44	34 Śārvarin		5 Śrāvaṇa
3746	567	702	51			*644-45	35 Plava		..
3747	568	703	52			645-46	36 Śubhakṛit		..

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali.
Day and month A D	Week-day	Time of true Mesha samkrānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
18 Mar (77)	4 Wed	17 33 18	28 Feb (59)	0 Sat.	163 5560	598 8261	226 3577	3723
18 Mar (77)	5 Thur	23 45 27	18 Mar (77)	5 Thur.	9859 6063	496 5279	274 9303	3724
19 Mar (78)	0 Sat	5 57 36	8 Mar (67)	3 Tues	73 9612	380 0635	246 8449	3725
18 Mar (78)	1 Sun .	12 9 45	25 Feb (56)	0 Sat	9949 6840	227 3076	216 0218	3726
18 Mar (77)	2 Mon	18 21 54	15 Mar (74)	6 Fri	9084 3664	163 3011	267 3321	3727
19 Mar (78)	4 Wed	0 34 3	4 Mar (63)	3 Tues	9860 0892	10 5451	236 5089	3728
19 Mar (78)	5 Thur	6 46 12	22 Feb (53)	1 Sun .	74 4441	894 0800	208 4235	3729
18 Mar (78)	6 Fri	12 58 21	12 Mar (72)	0 Sat	109 1265	830 0742	259 7340	3730
18 Mar (77)	0 Sat .	19 10 30	2 Mar (61)	5 Thur ††	323 4813	713 6100	231 6485	3731
19 Mar (78)	2 Mon	1 22 39	19 Feb (50)	2 Mon	199 2041	560 8540	200 8252	3732
19 Mar (78)	3 Tues	7 34 47	9 Mar (68)	0 Sat	9895 2545	461 5558	249·3979	3733
18 Mar (78)	4 Wed	13 46 56	26 Feb (57)	4 Wed	9770·9774	307 7999	218 5748	3734
18 Mar (77)	5 Thur	19 59 5	16 Mar (75)	3 Tues	9805 6597	243 7934	269 8851	3735
19 Mar (78)	0 Sat	2 11 14	6 Mar (65)	1 Sun .	20 0146	127 3290	241 0922	3736
19 Mar (78)	1 Sun	8 23 23	23 Feb (54)	5 Thur	9895 7375	974 5731	210 9765	3737
18 Mar (78)	2 Mon	14 35 32	13 Mar (73)	4 Wed	9930 4199	910 5666	262 2870	3738
18 Mar (77)	3 Tues	20 47 41	3 Mar (62)	2 Mon	144 7746	794 1023	234 2015	3739
19 Mar (78)	5 Thur	2 59 50	20 Feb (51)	6 Fri	20·4975	641 3463	203 3783	3740
19 Mar (78)	6 Fri .	9 11 59	11 Mar (70)	5 Thur	55 1799	577 3398	254 6887	3741
18 Mar (78)	0 Sat .	15 24 8	28 Feb (59)	2 Mon	9930 9027	424 5838	223 8655	3742
18 Mar (77)	1 Sun	21 36 17	18 Mar (77)	1 Sun	9965 5851	360 5774	275 1759	3743
19 Mar (78)	3 Tues	3 48 26	7 Mar (66)	5 Thur	9841 3081	207 8213	244 3527	3744
19 Mar (78)	4 Wed	10 0 35	25 Feb (56)	3 Tues	55 6628	91 3571	216 2673	3745
18 Mar (78)	5 Thur	16 12 44	15 Mar (75)	2 Mon	90 3451	27 3506	267 5776	3746
18 Mar (77)	6 Fri	22 24 53	4 Mar (63)	6 Fri	9966 0680	873 8747	236 7545	3747

†† See "Remarks," above, on page preceding the Table.

TABLE

			CONCURRENT YEAR.				Intercalated (adhika) and suppressed (kshaya) true lunar months.
Kali.	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A. D	JOVIAN SAMVATSARA	
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3748	569	704	53		646 47	37 Śōbhana . . .		4 Āshāḍha .
3749	570	705	54		647-48	38 Krōdhin . . .		.
3750	571	706	55		*648-49	39 Viśvāvasu† . . .		...
3751	572	707	56		649-50	41 Plavanga . .		2 Vaiśākha .
3752	573	708	57		650 51	42 Kīlaka . .		
3753	574	709	58		651-52	43 Saumya . . .		6 Bhādrapada.
3754	575	710	59		*652-53	44 Sādhārana . . .		
3755	576	711	60		653 54	45 Virōdhakṛit .		. .
3756	577	712	61		654 55	46 Paridhāvin .		4 Āshāḍha .
3757	578	713	62		655 56	47 Pramādin . .		. .
3758	579	714	63		*656 57	48 Ānanda .		. .
3759	580	715	64		657 58	49 Rākshasa . .		3 Jyēshṭha .
3760	581	716	65		658-59	50 Anala .		.
3761	582	717	66		659 60	51 Pingala . . .		7 Āśvina .
3762	583	718	67		*660 61	52 Kālayukta . .		...
3763	584	719	68		661 62	53 Siddhārthin . .		
3764	585	720	69		662 63	54 Raudra . .		5 Śrāvaṇa .
3765	586	721	70		663 64	55 Durmati . .		. .
3766	587	722	71		*664 65	56 Dundubhi . .		. .
3767	588	723	72		665-66	57 Rudhirōdgārin . .		4 Āshāḍha
3768	589	724	73		666-67	58 Raktāksha . .		. .
3769	590	725	74		667 68	59 Krōdhana . .		.
3770	591	726	75		*668 69	60 Kshaya . .		1 Chaitra .
3771	592	727	76		669 70	1 Prabhava . .		...
3772	593	728	77		670 71	2 Vibhava . .		5 Śrāvaṇa .

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COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali
Day and month A D	Week-day.	Time of true Mēsha saṁkrānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M. S.						
19 Mar (78)	1 Sun .	4 37 2	22 Feb (53)	4 Wed	180 4229	758 1223	208 6691	3748
19 Mar. (78)	2 Mon.	10 49 11	13 Mar, (72)	3 Tues	215 1052	694 1237	259 9795	3749
18 Mar. (78)	3 Tues	17 1 20	1 Mar (61)	0 Sat .	90 8281	541 3679	229 1662	3750
18 Mar. (77)	4 Wed	23 13 29	18 Feb (49)	4 Wed	9906 5309	388 6119	198 3330	3751
19 Mar (78)	6 Fri .	5 25 38	9 Mar. (68)	3 Tues	1 2333	324 6053	249 6435	3752
19 Mar (78)	0 Sat. .	11 37 47	26 Feb (57)	0 Sat .	9876 9561	171 8494	218 8203	3753
18 Mar (78)	1 Sun .	17 49 56	16 Mar (76)	6 Fri. .	9911 6385	107 8429	270 1306	3754
19 Mar (78)	3 Tues.	0 2 5	6 Mar (65)	4 Wed	125 9934	991 3786	242 0453	3755
19 Mar (78)	4 Wed.	6 14 14	23 Feb (54)	1 Sun	1 7162	838 6227	211 2221	3756
19 Mar. (78)	5 Thur	12 26 23	14 Mar (73)	0 Sat	36 3986	774 6161	262 5325	3757
18 Mar (78)	6 Fri .	18 38 32	3 Mar (63)	5 Thur	250 7534	658 1518	234 4470	3758
19 Mar. (78)	1 Sun.	0 50 41	20 Feb (51)	2 Mon.	126 5863	505 3958	203 6238	3759
19 Mar. (78)	2 Mon. .	7 2 50	10 Mar (69)	0 Sat .	9822 5266	405 0977	252 1965	3760
19 Mar (78)	3 Tues .	13 14 59	28 Feb. (59)	5 Thur.	36 8815	288 6334	224 1110	3761
18 Mar. (78)	4 Wed.	19 27 8	17 Mar (77)	3 Tues. .	9732 9319	188 3353	272 6836	3762
19 Mar. (78)	6 Fri. .	1 39 17	7 Mar (66)	1 Sun .	9947 2867	71 8709	244 5982	3763
19 Mar (78)	0 Sat. .	7 51 26	25 Feb (56)	6 Fri. .	161 6415	955 4066	216 5129	3764
19 Mar (78)	1 Sun. .	14 3 35	16 Mar (75)	5 Thur	196 2239	891 4001	267 8232	3765
18 Mar. (78)	2 Mon	20 15 44	4 Mar (64)	2 Mon	72 0468	738 6441	237 0000	3766
19 Mar (78)	4 Wed. .	2 27 53	21 Feb (52)	6 Fri .	9947 7696	585 8882	206 1768	3767
19 Mar (78)	5 Thur.	8 40 2	12 Mar (71)	5 Thur.	9982 6410	521 8617	257 4873	3768
19 Mar (78)	6 Fri. .	14 52 11	1 Mar. (60)	2 Mon.	9858 1749	309 1257	226 6640	3769
18 Mar (78)	0 Sat. .	21 4 20	18 Feb. (49)	6 Fri .	9733 8977	216 3699	195 8407	3770
19 Mar (78)	2 Mon	3 16 29	8 Mar (67)	5 Thur	9768 5801	152 5632	247 1512	3771
19 Mar. (78)	3 Tues.	9 28 38	26 Feb (57)	3 Tues.	9982 9349	35 8889	210 0659	3772

TABLE

CONCURRENT YEAR								Intercalated (adhika) and suppressed (kshaya) true lunar months
Kali	Śaka	Chaitrādi Vikrama	Meshādi solar year in Bengal	Kollam	A D	JOVIAN SAMVATSARA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3773	594	729	78		671 72	3 Śukla .	.	.	
3774	595	730	79		*672 73	4 Pramōda	.		
3775	596	731	80		673 74	5 Prajāpati	.	.	4 Āshādha .
3776	597	732	81		674-75	6 Angirasa	.		
3777	598	733	82		675 76	7 Śrīmukha	.	.	.
3778	599	734	83		*676 77	8 Bhāva	.	.	2 Vaiśākha .
3779	600	735	84		677-78	9 Yuvan	.	.	
3780	601	736	85		678-79	10 Dhātṛi	.	.	7 Āśvina
3781	602	737	86		679 80	11 Īśvara	.		
3782	603	738	87		*680 81	12 Bahudhānya	.	.	.
3783	604	739	88		681 82	13 Pramāthin	.	.	5 Śrāvana .
3784	605	740	89		682 83	14 Vikrama	.	.	
3785	606	741	90		683 84	15 Vṛisha	.		.
3786	607	742	91		*684 85	16 Chitrabhānu	.	.	3 Jyēshṭha .
3787	608	743	92		685 86	17 Subhānu	.	.	
3788	609	744	93		686 87	18 Tāraṇa	.	.	
3789	610	745	94		687 88	19 Pārthiva	.	.	1 Chaitra .
3790	611	746	95		*688 89	20 Vijaya	.	.	.
3791	612	747	96		689 90	21 Sarvajit	.	.	5 Śrāvana ..
3792	613	748	97		690 91	22 Sarvadhārin	.		
3793	614	749	98		691 92	23 Virōdhin	.		.
3794	615	750	99		*692 93	24 Vikṛita	.	.	4 Āshādha .
3795	616	751	100		693 94	25 Khara	.		.
3796	617	752	101		694 95	26 Nandana	.	.	
3797	618	753	102		695 96	27 Vijaya	.	.	2 Vaiśākha .

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COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).					Kali.
Day and month A. D	Week-day	Time of true Mésha-sam-krănti.	Day and month A. D	Week-day.	a	b	c	
13	14	17	19	20	23	24	25	1
		H. M S						
19 Mar (78)	4 Wed.	15 40 47	17 Mar. (76)	2 Mon	17 6173	971 8924	270 3762	3773
18 Mar (78)	5 Thur.	21 52 56	6 Mar (66)	0 Sat .	231 9621	855 4281	242 2907	3774
19 Mar (78)	0 Sat .	4 5 5	23 Feb (54)	4 Wed.	107 6950	702 6722	211 4676	3775
19 Mar (78)	1 Sun .	10 17 14	14 Mar (73)	3 Tues.	142 3774	628 6656	262 7781	3776
19 Mar (78)	2 Mon	16 29 23	3 Mar (62)	0 Sat .	18 1001	485 9097	231 9548	3777
18 Mar (78)	3 Tues	22 41 31	20 Feb (51)	4 Wed.	9893·8230	333 1537	201 1315	3778
19 Mar (78)	5 Thur	4 53 40	10 Mar (69)	3 Tues	9928 5054	269 1472	252 4420	3779
19 Mar (78)	6 Fri .	11 5 49	27 Feb (58)	0 Sat .	9804 2283	116 3913	221 6188	3780
19 Mar (78)	0 Sat .	17 17 58	18 Mar. (77)	6 Fri .	9838 9106	52 4848	272 9292	3781
18 Mar. (78)	1 Sun. .	23 30 7	7 Mar (67)	4 Wed	53 2655	935 9205	244 8437	3782
19 Mar (78)	3 Tues	5 42 16	25 Feb (56)	2 Mon	267 6203	819 4561	216 7584	3783
19 Mar (78)	4 Wed.	11 54 25	16 Mar (75)	1 Sun. .	302 3027	755 4496	268 0688	3784
19 Mar (78)	5 Thur	18 6 34	5 Mar (64)	5 Thur	178 0255	602 6936	237 5456	3785
19 Mar (79)	0 Sat. .	0 18 43	22 Feb (53)	2 Mon	53 7384	449 9378	206 4223	3786
19 Mar (78)	1 Sun	6 30 52	12 Mar (71)	1 Sun. .	88 4308	385 9312	257 7328	3787
19 Mar (78)	2 Mon	12 43 1	1 Mar (60)	5 Thur	9964 1536	233 1752	227 1096	3788
19 Mar (78)	3 Tues	18 55 10	18 Feb (49)	2 Mon	9839 8765	80 4194	196 0863	3789
19 Mar (79)	5 Thur.	1 7 19	8 Mar (68)	1 Sun. .	9974 5589	16 4127	247 3967	3790
19 Mar (78)	6 Fri. .	7 19 28	26 Feb (57)	6 Fri .	88 9137	899 9484	219 3114	3791
19 Mar (78)	0 Sat. .	13 31 37	17 Mar (76)	5 Thur	123 5960	835 9419	270 6218	3792
19 Mar (78)	1 Sun .	19 43 46	6 Mar (65)	2 Mon	9999 3189	683 1860	239 7986	3793
19 Mar (79)	3 Tues	1 55 55	24 Feb (55)	0 Sat, .	213 6738	566 7217	211 7131	3794
19 Mar (78)	4 Wed	8 8 4	13 Mar. (72)	5 Thur.	9009 7241	466 4235	260 1858	3795
19 Mar (78)	5 Thur	14 20 13	2 Mar. (61)	2 Mon	9785 4470	313 6675	229 4626	3796
19 Mar (78)	6 Fri. .	20 32 22	20 Feb (51)	0 Sat. .	9999 8018	197 2632	201 3771	3797

Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Jovian Samvatsara		Intercalated (adhika) and suppressed (kshaya) true lunar months
						CONCURRENT YEAR		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3798	619	754	103		*696 97	28 Jaya		6 Bhādrapada
3799	620	755	104		697-98	29 Manmatha		•••
3800	621	756	105		698 99	30 Durmukha		•
3801	622	757	106		699 700	31 Hēmalamba		•
3802	623	758	107		*700 70	32 Vilamba		5 Śrāvaṇa
3803	624	759	108		701 02	33 Vikārin		•
3804	625	760	109		702 03	34 Śārvarin		••
3805	626	761	110		703 04	35 Plava		3 Jyēshṭha
3806	627	762	111		*704-05	36 Śubhakṛit		•
3807	628	763	112		705 06	37 Sōbhana		••
3808	629	764	113		706 07	38 Krōdhin		1 Chaitra
3809	630	765	114		707-08	39 Viśvāvasu		••
3810	631	766	115		*708 09	40 Parābhava		5 Śrāvaṇa
3811	632	767	116		709 10	41 Plavanga		•••
3812	633	768	117		710 11	42 Kīlaka		4 Āshāḍha
3813	634	769	118		711-12	43 Saumya		
3814	635	770	119		*712-13	44 Sādhāraṇa		••
3815	636	771	120		713 14	45 Virōdhakṛit		•
3816	637	772	121		714-15	46 Paridhāvin		2 Vaiśākha
3817	638	773	122		715 16	47 Pramādin		•
3818	639	774	123		*716 17	48 Ānanda		6 Bhādrapada
3819	640	775	124		717-18	49 Rākshasa		
3820	641	776	125		718-19	50 Anala		
3821	642	777	126		719 20	51 Pingala		5 Śrāvana
3822	643	778	127		*720 21	52 Kālayukta		

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COMMENCEMENT OF THE								
Solar year			Luni-solar year (mean sunrise of civil day on which Chaitra śukla 1 ends).					Kali.
Day and month A D	Week-day	Time of true Mīsha saṁkrānti	Day and month A D	Week-day.	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
19 Mar (79)	1 Sun .	2 44 31	10 Mar (70)	6 Fri	34 4841	133 1967	252 6875	3798
19 Mar (78)	2 Mon	8 56 40	27 Feb (58)	3 Tues	9910 2070	980 4408	221 8643	3799
19 Mar (78)	3 Tues	15 8 49	18 Mar (77)	2 Mon	9944 8894	916 4343	273 1748	3800
19 Mar (78)	4 Wed	21 20 58	8 Mar (67)	0 Sat	159 2443	799 9700	245 0671	3801
19 Mar (79)	6 Fri	3 33 7	25 Feb (56)	4 Wed	34 9671	647 2140	214 2440	3802
19 Mar (78)	0 Sat	9 45 16	15 Mar (74)	3 Tues	69 6496	583 2074	265 5543	3803
19 Mar (78)	1 Sun.	15 57 25	4 Mar (63)	0 Sat .	9945 3723	430 4516	234 7311	3804
19 Mar (78)	2 Mon	22 9 34	21 Feb (52)	4 Wed	9821 0852	277 6956	203 9079	3805
19 Mar (79)	4 Wed	4 21 43	11 Mar (71)	3 Tues .	9855 7776	213 6890	255 2184	3806
19 Mar (78)	5 Thur.	10 33 52	1 Mar (60)	1 Sun	70 1324	97 2248	227 1329	3807
19 Mar (78)	6 Fri	16 46 1	18 Feb (49)	5 Thur	9946 0956	944 4986	196 3096	3808
19 Mar (78)	0 Sat	22 58 10	9 Mar (68)	4 Wed	9980 5376	880 4623	247 6201	3809
19 Mar (79)	2 Mon	5 10 19	27 Feb (58)	2 Mon	194 8924	773 9979	219 5348	3810
19 Mar. (78)	3 Tues	-11 22 28	17 Mar (76)	1 Sun	230 5748	699 9914	270 8451	3811
19 Mar (78)	4 Wed.	17 34 37	6 Mar (65)	5 Thur	105 2977	547 2355	240 0219	3812
19 Mar (78)	5 Thur	23 46 46	23 Feb (54)	2 Mon	9981 0206	394 4796	209 1987	3813
19 Mar (79)	0 Sat	5 58 55	13 Mar (73)	1 Sun .	15 7029	330 4730	260 5092	3814
19 Mar (78)	1 Sun.	12 11 4	2 Mar (61)	5 Thur	9891 4258	178 7171	229 6859	3815
19 Mar (78)	2 Mon	18 23 13	20 Feb (51)	3 Tues	105 7806	61 2528	201 6004	3816
20 Mar (79)	4 Wed	0 35 22	11 Mar (70)	2 Mon	140 4629	997 2462	252 9109	3817
19 Mar (79)	5 Thur	6 47 31	28 Feb (59)	6 Fri	16 1858	844 4903	222 0877	3818
19 Mar (78)	6 Fri.	12 59 40	18 Mar (77)	5 Thur	· 50 8682	780 4838	273 3981	3819
19 Mar (78)	0 Sat	19 11 49	8 Mar (67)	3 Tues	265 2231	604 0195	245 3126	3820
20 Mar (79)	2 Mon	1 23 58	25 Feb (56)	0 Sat	140 9458	511 2635	214 4895	3821
19 Mar (79)	3 Tues	7 36 7	14 Mar (74)	5 Thur	9836 9963	410 9654	263 0622	3822

Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam.	A D.	Jovian Samvatsara Southern system.	Northern system	Intercalated (adhika) and suppressed (kshaya) true lunar months
1	2	3	3a	4	5	6	7	8
						53 Siddhārthin		3 Jyēshtha
					721-22	54 Raudra		
3823	644	779	128		722-23	55 Durmati		{ 7 Āśvina / 9 Mārgas (ksh) }
3824	645	780	129		723-24	56 Dundubhi		1 Chaitra
3825	646	781	130		*724-25	57 Rudhirōdgārin		
3826	647	782	131		725-26	58 Raktāksha		5 Śrāvaṇa
3827	648	783	132		726-27	59 Krōdhana		
3828	649	784	133		727-28	60 Kshaya		
3829	650	785	134		*728-29	1 Prabhava		4 Āshāḍha
3830	651	786	135		729-30	2 Vibhava		
3831	652	787	136		730-31	3 Śukla		
3832	653	788	137		731-32	4 Pramōda		2 Vaiśākha
3833	654	789	138		*732-33	5 Prajāpati		
3834	655	790	139		733-34	6 Angirasa†		6 Bhādrapada
3835	656	791	140		734-35	8 Bhāva		
3836	657	792	141		735-36	9 Yuvan		
3837	658	793	142		*736-37	10 Dhātṛ		5 Śrāvaṇa
3838	659	794	143		737-38	11 Īśvara		
3839	660	795	144		738-39	12 Bahudhānya		
3840	661	796	145		739-40	13 Pramāthin		3 Jyēshtha
3841	662	797	146		*740-41	14 Vikrama		
3842	663	798	147		741-42	15 Vrisha		{ 7 Āśvina / 11 Māgha (ksh) }
3843	664	799	148		742-43	16 Chitrabhānu		1 Chaitra
3844	665	800	149		743-44	17 Subhānu		
3845	666	801	150		*744-45	18 Tāraṇa		
3846	667	802	151		745-46			
3847	668	803	152					

† 7 Śrīmukha, was suppressed.

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COMMENCEMENT OF THE								Kali
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					
Day and month A. D.	Week-day	Time of true Mēsha sam-krānti.	Day and month A D	Week-day.	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
19 Mar. (78)	4 Wed	13 48 15	4 Mar (63)	3 Tues	51 3511	294 5011	234 9767	3823
19 Mar (78)	5 Thur	20 0 24	21 Feb (52)	0 Sat	9027 0739	141 7452	204 1534	3824
20 Mar (79)	0 Sat	2 12 33	12 Mar (71)	6 Fri	9961 7563	77 7385	255 4693	3825
19 Mar (79)	1 Sun	8 24 42	1 Mar (61)	4 Wed	176 1112	961 2743	227 3785	3826
19 Mar (78)	2 Mon.	14 36 51	18 Feb (49)	1 Sun	51 8342	808 5184	196 5552	3827
19 Mar (78)	3 Tues	20 49 0	9 Mar (68)	0 Sat	86 5163	744 5118	247 8656	3828
20 Mar (79)	5 Thur	3 1 9	26 Feb (57)	4 Wed	9962 2392	591 7559	217 0425	3829
19 Mar (79)	6 Fri	9 13 18	16 Mar (76)	3 Tues	9996 9216	527 7493	268 3529	3830
19 Mar. (78)	0 Sat	15 25 27	5 Mar (64)	0 Sat	9872 0444	374 9934	237 5297	3831
19 Mar (78)	1 Sun	21 37 36	22 Feb (53)	4 Wed	9748 3673	222 2374	206 7064	3832
20 Mar (79)	3 Tues	3 49 45	13 Mar (72)	3 Tues	9783 0497	158 2309	258 0169	3833
19 Mar (79)	4 Wed	10 1 54	2 Mar (62)	1 Sun	9997 4046	41 7666	229 9215	3834
19 Mar (78)	5 Thur	16 14 3	20 Feb (51)	6 Fri	211 7493	925 3023	201 8460	3835
19 Mar (78)	6 Fri	22 26 12	11 Mar (70)	5 Thur	246 4417	861 2958	253 1564	3836
20 Mar (79)	1 Sun	4 38 21	28 Feb (59)	2 Mon	122 1046	708 5398	222 3332	3837
19 Mar (76)	2 Mon.	10 50 30	18 Mar (78)	1 Sup	156 8460	644 5333	274 6437	3838
19 Mar (78)	3 Tues	17 2 39	7 Mar (66)	5 Thur	32 5698	501 7773	242 8204	3839
19 Mar (78)	4 Wed	23 14 48	24 Feb (55)	2 Mon.	9908 2926	339 0214	211 9973	3840
20 Mar (79)	6 Fri	5 26 57	15 Mar (74)	1 Sun	9942 9751	275 0149	263 2077	3841
19 Mar. (79)	0 Sat	11 39 6	3 Mar (63)	5 Thur	9818 6978	122 2588	232 4845	3842
19 Mar (78)	1 Sun	17 51 15	21 Feb (52)	3 Tues	33 0527	5 7947	204 3990	3843
20 Mar (79)	3 Tues	0 3 24	12 Mar (71)	2 Mon	67 7351	941 7880	255 7105	3844
20 Mar (79)	4 Wed	6 15 33	2 Mar (61)	0 Sat	282 0900	825 3238	227 0240	3845
19 Mar (79)	5 Thur.	12 27 42	19 Feb (50)	4 Wed	157 8127	672 5678	196 8007	3846
19 Mar. (78)	6 Fri	18 39 51	9 Mar (68)	3 Tues	192 4951	608 5613	248 1112	3847

						Jovian Samvatsara.		Intercalated (adhika) and suppressed (kshaya) true lunar months.
Kali	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam.	A D.	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8
3848	669	804	153		746 47	19 Pārthiva . . .		5 Srāvana .
3849	670	805	154		747-48	20 Vyaya . . .		...
3850	671	806	155		*748-49	21 Sarvajit . . .		...
3851	672	807	156		749 50	22 Sarvadhārin . .		3 Jyēshtha
3852	673	808	157		750 51	23 Virōdhin . . .		...
3853	674	809	158		751-52	24 Vikrita . . .		. .
3854	675	810	159		*752-53	25 Khara . . .		2 Vaiśākha .
3855	676	811	160		753 54	26 Nandana . . .		..
3856	677	812	161		754-55	27 Vijaya . . .		0 Bhādrapada
3857	678	813	162		755-56	28 Jaya		...
3858	679	814	163		*756 57	29 Manmatha . . .		. .
3859	680	815	164		757-58	30 Durmukha . . .		4 Āshādha .
3860	681	816	165		758 59	31 Hēmalamba . .		...
3861	682	817	166		759 60	32 Vilamba . . .		...
3862	683	818	167		*760 61	33 Vikārin . . .		3 Jyēshtha
3863	684	819	168		761-62	34 Śārvarin . . .		...
3864	685	820	169		762-63	35 Plava		7 Āśvina .
3865	686	821	170		763 64	36 Subhakrit . . .		...
3866	687	822	171		*764-65	37 Śōbhana . . .		...
3867	688	823	172		765 66	38 Krōdhin . . .		5 Srāvana
3868	689	824	173		766 67	39 Viśvāvasu . . .		...
3869	690	825	174		767-68	40 Parābhava .		...
3870	691	826	175		*768 69	41 Plavanga . . .		3 Jyēshtha
3871	692	827	176		769-70	42 Kilaka . . .		...
3872	693	828	177		770 71	43 Saumya . . .		...

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COMMENCEMENT OF THE								Kah.
SOLAR YEAR.			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					
Day and month A D	Week-day	Time of true Mēsha samkrānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
20 Mar. (79)	1 Sun	0 52 0	26 Feb (57)	0 Sat .	68 2180	455 8054	217 2881	3848
20 Mar (79)	2 Mon	7 4 9	17 Mar (76)	6 Fri .	102 9003	391 7988	268 4984	3849
19 Mar (79)	3 Tues	13 16 18	5 Mar (65)	3 Tues	9978 6232	239 0429	237 7752	3850
19 Mar (78)	4 Wed	19 28 27	22 Feb (53)	0 Sat .	9854 3461	86 2869	206 9520	3851
20 Mar (79)	6 Fri .	1 10 36	13 Mar (72)	6 Fri	9889 0285	22 2804	258 2625	3852
20 Mar (79)	0 Sat .	7 52 45	3 Mar (62)	4 Wed	103 3833	905 8161	230 1770	3853
19 Mar. (79)	1 Sun .	14 4 54	21 Feb (52)	2 Mon	317 7384	789 3518	202 0915	3854
19 Mar (78)	2 Mon	20 17 3	10 Mar (69)	0 Sat	13 7885	689 0537	250 6642	3855
20 Mar (79)	4 Wed	2 29 12	28 Feb (59)	5 Thur	228 1433	572 5804	222 5788	3856
20 Mar (79)	5 Thur	8 41 21	18 Mar (77)	3 Tues.	9924 1037	472 2911	271 1514	3857
19 Mar (79)	6 Fri .	14 53 30	6 Mar. (66)	0 Sat .	9799 9166	319 5352	240 3282	3858
19 Mar (78)	0 Sat.	21 5 39	24 Feb (55)	5 Thur	14 2714	203 0709	212 2428	3859
20 Mar (79)	2 Mon	3 17 48	15 Mar (74)	4 Wed	48 9538	139 0644	263 5533	3860
20 Mar (79)	3 Tues	9 29 57	4 Mar (63)	1 Sun .	9924 6766	986 3084	232 7300	3861
19 Mar (79)	4 Wed	15 42 6	22 Feb. (53)	6 Fri .	139 0315	869 8442	204 6445	3862
19 Mar (78)	5 Thur	21 54 15	12 Mar (71)	5 Thur.	173 7138	805 8377	255 9550	3863
20 Mar (79)	0 Sat .	4 6 24	1 Mar (60)	2 Mon	49 4367	653 0816	225 1318	3864
20 Mar (79)	1 Sun	10 18 33	20 Mar (79)	1 Sun	84 1191	589 0751	276 4422	3865
19 Mar (79)	2 Mon	16 30 42	8 Mar (68)	5 Thur	9959 8420	436 3192	245 6189	3866
19 Mar (78)	3 Tues	22 42 51	25 Feb (56)	2 Mon	9835 5647	283 5633	214 7958	3867
20 Mar (79)	5 Thur	4 55 0	16 Mar (75)	1 Sun	9870 2472	219 5507	266 1062	3868
20 Mar (79)	6 Fri .	11 7 8	6 Mar (65)	6 Fri .	84 6020	103 0923	238 0208	3869
19 Mar (79)	0 Sat	17 19 17	23 Feb (54)	3 Tues	9960 3248	950 3365	207 1975	3870
19 Mar (78)	1 Sun	23 31 26	13 Mar (72)	2 Mon	9995 0072	880 3299	258 5080	3871
20 Mar (79)	3 Tues	5 43 35	3 Mar (62)	0 Sat	209 3621	769 8656	230 4226	3872

TABLE

CONCURRENT YEAR						JOVIAN SAMVATSARA		Intercalated (adhika) and suppressed (kshaya) true lunar months
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3873	694	829	178		771-72	44 Sādhārana	.	2 Vaiśākha .
3874	695	830	179		*772-73	45 Virōdhakṛit		
3875	696	831	180		773 74	46 Paridhāvin .	.	6 Bhādrapada
3876	697	832	181		774 75	47 Pramādin .	.	.
3877	698	833	182		775 76	48 Ānanda .	.	
3878	699	834	183		*776-77	49 Rākshasa .		4 Āshādha
3879	700	835	184		777-78	50 Anala .	.	
3880	701	836	185		778 79	51 Pingala .	.	
3881	702	837	186		779 80	52 Kālayukta .	.	3 Jyēshtha
3882	703	838	187		*780 81	53 Siddhārthin .	.	..
3883	704	839	188		781-82	54 Raudra .	.	7 Āśvina .
3884	705	840	189		782-83	55 Durmati .	.	
3885	706	841	190		783 84	56 Dundubhi .		
3886	707	842	191		*784 85	57 Rudhirōdgārin .		5 Śrāvana .
3887	708	843	192		785 86	58 Raktāksha .	.	
3888	709	844	193		786 87	59 Krōdhana .	.	.
3889	710	845	194		787 88	60 Kshaya .		..
3890	711	846	195		*788 89	1 Prabhava .		3 Jyēshtha .
3891	712	847	196		789-90	2 Vibhava .	.	
3892	713	848	197		790 91	3 Śukla .	.	
3893	714	849	198		791-02	4 Pramōda .	.	2 Vaiśākha .
3894	715	850	199		*792 93	5 Prajāpati .	.	
3995	716	851	200		793 94	6 Angiras .	.	6 Bhādrapada
3996	717	852	201		794 95	7 Śrīmukha .	.	
3997	718	853	202		795 96	8 Bhāva .		4 Āshūḍha .

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		COMMENCEMENT OF THE					
SOLAR YEAR.			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)				Kali.
Day and month A. D	Week-day.	Time of true Mesha saṁkrānti	Day and month A. D.	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
20 Mar (79)	4 Wed .	11 55 44	20 Feb (51)	4 Wed	75 0849	617 1097	199 5993	3873
19 Mar (79)	5 Thur	18 7 53	10 Mar (70)	3 Tues	119 7672	553 1032	250 9097	3874
20 Mar (79)	0 Sat .	0 20 2	27 Feb (58)	0 Sat .	9995 4901	400 3472	220 0866	3875
20 Mar. (79)	1 Sun .	6 32 11	18 Mar (77)	6 Fri	30 1725	336 3306	271 3970	3876
20 Mar (79)	2 Mon	12 44 20	7 Mar (66)	3 Tues	9905 8953	183 5848	240 5738	3877
19 Mar (79)	3 Tues	18 56 29	25 Feb (56)	1 Sun	120 2501	67 1204	212 4883	3878
20 Mar (79)	5 Thur	1 8 38	15 Mar (74)	0 Sat .	154 9326	3 1139	263 7988	3879
20 Mar (79)	6 Fri .	7 20 47	4 Mar (63)	4 Wed.	30 6554	850 3579	232 9756	3880
20 Mar (79)	0 Sat .	13 32 56	22 Feb (53)	2 Mon	245 0102	733 8937	204 8901	3881
19 Mar (79)	1 Sun .	19 45 5	12 Mar (72)	1 Sun .	279 6926	669 8872	256 2005	3882
20 Mar (79)	3 Tues	1 57 14	1 Mar (60)	5 Thur	155 4155	517 1311	225 3773	3883
20 Mar (79)	4 Wed	8 9 23	19 Mar (78)	3 Tues	9851 4059	416 8330	273 9500	3884
20 Mar (79)	5 Thur.	14 21 32	8 Mar (67)	0 Sat	9727 1887	264 0770	243 1167	3885
19 Mar (79)	6 Fri .	20 33 41	26 Feb (57)	5 Thur	9941 5435	147 0128	215 0413	3886
20 Mar (79)	1 Sun	2 45 50	16 Mar (75)	4 Wed	9976 2260	83 6062	266 3517	3887
20 Mar (79)	2 Mon	8 57 59	6 Mar (65)	2 Mon	190 5807	967·1418	238 2664	3888
20 Mar (79)	3 Tues	15 10 8	23 Feb (54)	6 Fri. .	66 3036	814 3852	207 4431	3889
19 Mar (79)	4 Wed	21 22 17	13 Mar. (73)	5 Thur	100 9860	750 3794	258 7535	3890
20 Mar (79)	6 Fri .	3 34 26	2 Mar (61)	2 Mon	9976 7089	597 6235	227 9303	3891
20 Mar (79)	0 Sat .	9 46 35	19 Feb (50)	6 Fri .	9852 4317	444 8676	197 1071	3892
20 Mar (79)	1 Sun	15 58 44	10 Mar (69)	5 Thur	9887·1140	380 8610	248 4175	3893
19 Mar (79)	2 Mon	22 10 53	27 Feb (58)	2 Mon	9702 8369	228 1051	218 4943	3894
20 Mar (79)	4 Wed	4 23 2	17 Mar (76)	1 Sun .	9797 5192	164 0986	268 9047	3895
20 Mar (79)	5 Thur	10 35 11	7 Mar (66)	6 Fri	11 8741	47 6342	240 8194	3896
20 Mar (79)	6 Fri	16 47 20	25 Feb (56)	4 Wed	226 2289	931 1699	212 7339	3897

TABLE

CONCURRENT YEAR								Intercalated (adhika) and suppressed (kshaya) true lunar months
						JOVIAN SAMVATSARA		
Kali	Śaka	Chaitrādi Vikrama	Māshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3898	719	854	203		*796-97	9 Yuvan •		•
3899	720	855	204		797-98	10 Dhātṛi	•	•
3900	721	856	205		798-99	11 Īśvara •		3 Jyēshtha •
3901	722	857	206		799 800	12 Bahudhānya •		•
3902	723	858	207		*800 01	⊕13 Pramāthin •		7 Āśvina •
3903	724	859	208		801 02	14 Vikrama •	•	•
3904	725	860	209		802 03	15 Vṛisha •	•	•••
3905	726	861	210		803 04	16 Chitrabhānu •		5 Śrāvana •
3906	727	862	211		*804-05	17 Subhānu •	•	••
3907	728	863	212		805 06	18 Tārana •	•	•
3908	729	864	213		806 07	19 Pārthiva •	•	3 Jyēshtha •
3909	730	865	214		807 08	20 Vyaya •	•	••
3910	731	866	215		*808-09	21 Sarvajit •	•	•
3911	732	867	216		809-10	22 Sarvadhārin		1 Chaitra •
3912	733	868	217		810 11	23 Virōdhin •	•	•
3913	734	869	218		811-12	24 Vikṛita •	•	5 Śrāvana •
3914	735	870	219		*812-13	25 Khara •	•	•
3915	736	871	220		813-14	26 Nandana •	•	••
3916	737	872	221		814 15	27 Vijaya •	•	4 Āshādha •
3917	738	873	222		815 16	28 Jaya •	•	•••
3918	739	874	223		*816-17	29 Manmatha •	•	•
3919	740	875	224		817-18	30 Durmukha •	•	3 Jyēshtha •
3920	741	876	225		818-19	31 Hēmalamba •	•	•••
3921	742	877	226		819-20	32 Vilamba† •	•	7 Āśvina •
3922	743	878	227		*820 21	34 Śārtarin •	•	•••

† 33 Vikārin was suppressed.

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).					Kali
Day and month A. D	Week-day	Time of true Mesha sam kranti	Day and month A D.	Week day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
19 Mar (79)	0 Sat	22 59 29	15 Mar (75)	3 Tues	260 9113	867 1634	264 0442	3898
20 Mar (79)	2 Mon	5 11 38	4 Mar (63)	0 Sat	136 6341	714 4074	233 2211	3899
20 Mar (79)	3 Tues	11 23 47	21 Feb (52)	4 Wed	12 3570	561 6515	202 3979	3900
20 Mar (79)	4 Wed	17 35 56	12 Mar (71)	3 Tues	47 0394	497 6449	253 6621	3901
19 Mar (79)	5 Thur	23 48 5	19 Feb (60)	0 Sat .	9922 7623	344 8890	222 8629	3902
20 Mar (79)	0 Sat	6 0 14	19 Mar (78)	6 Fri .	9957 4347	280 8825	274 1733	3903
20 Mar (79)	1 Sun	12 12 23	8 Mar (67)	3 Tues	9833 1675	128 1265	243 3500	3904
20 Mar (79)	2 Mon	18 24 32	26 Feb (57)	1 Sun	47 5223	11 6622	215 2647	3905
20 Mar (80)	4 Wed.	0 36 41	16 Mar (76)	0 Sat -	82 2048	947 6557	266 5751	3906
20 Mar (79)	·5 Thur	6 48 50	6 Mar (65)	5 Thur	296 5595	831 1914	238 4897	3907
20 Mar (79)	6 Fri .	13 0 59	23 Feb (54)	2 Mon .	172 2824	678 4354	207 6664	3908
20 Mar (79)	0 Sat. .	10 13 8	14 Mar (73)	1 Sun .	206 9648	614 4289	258 9769	3909
20 Mar (80)	2 Mon	1 25 17	2 Mar (62)	5 Thur	82 6876	461·6730	228 1537	3910
20 Mar. (79)	3 Tues.	7 37 26	19 Feb (50)	2 Mon	9958 4105	308·9171	197 3304	3911
20 Mar (79)	4 Wed .	13 49 35	10 Mar (69)	1 Sun	9993 0928	244·9104	248 6408	3912
20 Mar (79)	5 Thur	20 1 44	27 Feb (58)	5 Thur	9868 8157	92 1545	217 8177	3913
20 Mar (80)	0 Sat .	2 13 52	17 Mar (77)	4 Wed	9903 4980	28 1481	269 1281	3914
20 Mar (79)	1 Sun	8 26 1	7 Mar (66)	2 Mon	117 8529	906 6837	251 0427	3915
20 Mar (79)	2 Mon	14 38 10	24 Feb (55)	6 Fri .	9993 5758	758 9278	210 2194	3916
20 Mar (79)	3 Tues	20 50 19	15 Mar (74)	5 Thur	28 2581	694 9212	264 5299	3917
20 Mar. (80)	5 Thur	3 2 28	3 Mar (63)	2 Mon .	9903 9810	542 1653	230 7067	3918
20 Mar. (79)	6 Fri .	9 14 37	21 Feb (52)	0 Sat .	118 3358	425 7009	202 6212	3919
20 Mar (79)	0 Sat .	15 26 46	11 Mar (70)	5 Thur .	9814 3862	325 4028	251 1938	3920
20 Mar (79)	1 Sun	21 38 55	1 Mar (60)	3 Tues	28 7410	208 9389	223·1084	3921
20 Mar (80)	3 Tues	3 51 4	19 Mar (79)	2 Mon	63 4234	144·9321	274 3989	3922

TABLE

CONCURRENT YEAR						JOVIAN SAMVATSARA		Intercalated (*adhika*) and suppressed (*kshaya*) true lunar months
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
3923	744	879	228		821-22	35 Plava		
3924	745	880	229		822-23	36 Śubhakṛit		5 Śrāvaṇa
3925	716	881	230		823-24	37 Śōbhana		
3926	747	882	231		*824-25	38 Krōdhin		
3927	748	883	232	0 1	825 26	39 Viśvāvasu		3 Jyēshṭha
3928	749	884	233	1-2	826 27	40 Parābhava		
3929	750	885	234	2-3	827-28	41 Plavanga		
3930	751	886	235	3 4	*828 29	42 Kīlaka		1 Chaitra
3931	752	887	236	4-5	829 30	43 Saumya		
3932	753	888	237	5 6	830 31	44 Sādhārana		5 Śrāvana
3933	754	889	238	6-7	831-32	45 Virōdhakṛit		
3934	755	890	239	7-8	*832-33	46 Paridhāvin		
3935	756	891	240	8 9	833 34	47 Pramādin		4 Āshādha
3936	757	892	241	9 10	834 35	48 Ānanda		
3937	758	893	242	10 11	835 36	49 Rākshasa		
3938	759	894	243	11 12	*836 37	50 Anala		2 Vaiśākha
3939	760	895	244	12 13	837 38	51 Piṅgala		
3940	761	896	245	13 14	838 39	52 Kālayukta		6 Bhādrapada
3941	762	897	246	14 15	839 40	53 Siddhārthin		
3942	763	898	247	15 16	*840-41	54 Raudra		. . .
3943	764	899	248	16 17	841 42	55 Durmati		5 Śrāvaṇa
3944	765	900	249	17 18	842 43	56 Dundubhi		
3945	766	901	250	18 19	843 44	57 Rudhirōdgārin		
3946	767	902	251	19 20	*844-45	58 Raktāksha		3 Jyēshṭha
3947	768	903	252	20-21	845 46	59 Krōdhana		. .

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COMMENCEMENT OF THE									
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)						Kali
Day and month A D	Week-day	Time of true Mesha sam-kranti	Day and month A D	Week-day	a	b			
13	14	17	19	20	23	24	25	1
		H M S						
20 Mar (79)	4 Wed	10 3 13	8 Mar (67)	6 Fri	9939 1463	992 1760	243 5956	3923
20 Mar (79)	5 Thur	16 15 22	26 Feb (57)	4 Wed	153 5010	875 7118	215 5102	3924
20 Mar (79)	6 Fri	22 27 31	17 Mar (76)	3 Tues	188 1834	811 7052	266 8206	3925
20 Mar. (80)	1 Sun	4 39 40	5 Mar (65)	0 Sat .	63 9063	658 9493	235 9975	3926
20 Mar (79)	2 Mon	10 51 49	22 Feb (53)	4 Wed	9939 6292	506 1933	205 1642	3927
20 Mar (79)	3 Tues	17 3 58	13 Mar (72)	3 Tues	9974 3115	442 1868	256 4846	3928
20 Mar (79)	4 Wed	23 16 7	2 Mar (61)	0 Sat	9850 0344	289 4309	225 6614	3929
20 Mar (80)	6 Fri	5 28 16	20 Feb (51)	5 Thur	64 6593	172 9666	197 5760	3930
20 Mar (79)	0 Sat	11 40 25	10 Mar (69)	4 Wed	98 8015	108 9590	248 8864	3931
20 Mar (79)	1 Sun	17 52 34	27 Feb (58)	1 Sun	9974 7944	956 2040	218 0632	3932
21 Mar (80)	3 Tues	0 4 43	18 Mar (77)	0 Sat	9 4768	892 1976	269 3736	3933
20 Mar (80)	4 Wed	6 16 52	7 Mar (67)	5 Thur	223 8317	775 7333	241 2883	3934
20 Mar (79)	5 Thur	12 29 1	24 Feb (55)	2 Mon	99 5545	622 9773	210 4650	3935
20 Mar (79)	6 Fri	18 41 10	15 Mar (74)	1 Sun	134 2369	558 9708	261 7754	3936
21 Mar (80)	1 Sun	0 53 19	4 Mar (63)	5 Thur	9 9598	406 2148	230 9522	3937
20 Mar (80)	2 Mon	7 5 28	21 Feb (52)	2 Mon	9885 6826	253 4589	200 1290	3938
20 Mar (79)	3 Tues	13 17 37	11 Mar (70)	1 Sun	9920 3649	189 4523	252 4294	3939
20 Mar (79)	4 Wed	19 29 46	28 Feb (59)	5 Thur	9796 0878	36 6964	220 6162	3940
21 Mar (80)	6 Fri	1 41 55	20 Mar (79)	5 Thur	169 4022	8 9816	274 6644	3941
20 Mar (80)	0 Sat	7 54 4	8 Mar (68)	2 Mon	45 1250	856 2255	213 8412	3942
20 Mar (79)	1 Sun	14 6 13	26 Feb (57)	0 Sat	250 4798	739 7613	215 7558	3943
20 Mar. (79)	3 Mon	20 18 22	17 Mar (76)	6 Fri	294 1622	675 7547	267 0662	3944
21 Mar (80)	4 Wed	2 30 31	6 Mar (65)	3 Tues	169 8851	522 9988	236 0990	3945
20 Mar (80)	5 Thur	8 42 40	23 Feb (54)	0 Sat	45 5979	370 2428	205 4197	3946
20 Mar (79)	6 Fri	14 54 49	12 Mar (71)	5 Thur	9741 6583	269 9446	253 9924	3947

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COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali
Day and month A D	Week-day.	Time of true Mēsha saṁ-krānti.	Day and month A. D	Week-day.	a	b	c	
13	14	17	19	20	23	24	25	1
		H. M S						
20 Mar (79)	0 Sat.	21 6 58	2 Mar (61)	3 Tues.	9956·0132	153 4804	226 0070	3948
21 Mar (80)	2 Mon.	3 19 7	19 Feb (50)	0 Sat.	9832 2167	0 7839	195 0837	3949
20 Mar (80)	3 Tues.	9 31 16	10 Mar (70)	0 Sat.	205 0503	973·0095	249 2319	3950
20 Mar (79)	4 Wed.	15 43 25	27 Feb (58)	4 Wed.	80 7732	820 2535	218 4088	3951
20 Mar. (79)	5 Thur	21 55 34	18 Mar (77)	3 Tues.	115 4556	756 2470	269 6192	3952
21 Mar (80)	0 Sat.	4 7 43	7-Mar (66)	0 Sat.	9991 1784	603 4911	238 7960	3953
20 Mar (80)	1 Sun	10 19 52	24 Feb (55)	4 Wed.	9866 9013	450·7353	207 9727	3954
20 Mar (79)	2 Mon	16 32 1	14 Mar (73)	3 Tues.	9900 5837	386 7286	259 2832	3955
20 Mar (79)	3 Tues.	22 49 10	3 Mar (62)	0 Sat.	9777 3065	233 9727	228 4600	3956
21 Mar (80)	5 Thur	4 56 19	21 Feb (52)	5 Thur	9991 6613	117 5094	200 3745	3957
20 Mar (80)	6 Fri.	11 8 28	11 Mar (71)	4 Wed.	26 3437	53 5018	251·6849	3958
20 Mar (79)	0 Sat.	17 20 37	1 Mar. (60)	2 Mon.	240 4285	937 0375	223 5995	3959
20 Mar. (79)	1 Sun.	23 32 45	20 Mar. (79)	1 Sun.	275 3809	873 0310	274·9100	3960
21 Mar (80)	3 Tues.	5 44 54	9 Mar (68)	5 Thur	151 1038	720·2751	244 0867	3961
20 Mar (80)	4 Wed.	11 57 3	26 Feb (57)	2 Mon.	26 8266	567·5191	213 2635	3962
20 Mar (79)	5 Thur.	18 9 12	16 Mar (75)	1 Sun.	61 5090	503 5126	264 5739	3963
21 Mar (80)	0 Sat.	0 21 21	5 Mar. (64)	5 Thur	9937 2318	350 7566	233 5708	3964
21 Mar (80)	1 Sun	6 33 30	22 Feb (53)	2 Mon.	9812 9547	198 0007	202 9275	3965
20 Mar (80)	2 Mon.	12 45 39	12 Mar. (72)	1 Sun.	9847 6371	132 9941	254 2379	3966
20 Mar (79)	3 Tues.	18 57 48	2 Mar (61)	6 Fri.	61 9919	17 5299	226 1525	3967
21 Mar. (80)	5 Thur.	1 9 57	19 Feb (50)	3 Tues.	9937 7149	864 7741	195 8293	3968
21 Mar (80)	6 Fri.	7 22 6	11 Mar (70)	3 Tues.	311 0291	837 0590	249 3775	3969
20 Mar (80)	0 Sat.	13 34 15	28 Feb (59)	0 Sat.	186 7519	684 3031	218 5543	3970
20 Mar (79)	1 Sun.	19 46 24	18 Mar (77)	6 Fri	221 4343	620·2965	269 8647	3971
21 Mar (80)	3 Tues.	1 58 33	7 Mar (66)	3 Tues.	97 1572	467 5406	239 0416	3972

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COMMENCEMENT OF THE								Kali
SOLAR YEAR.			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					
Day and month A.D	Week-day.	Time of true Mesha samkrānti.	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
20 Mar (79)	0 Sat. .	21 6 58	2 Mar. (61)	3 Tues. .	9956 0132	153 4804	226 0070	3948
21 Mar (80)	2 Mon. .	3 19 7	19 Feb (50)	0 Sat. .	9832 2167	0·7839	195 0837	3949
20 Mar (80)	3 Tues.	9 31 16	10 Mar (70)	0 Sat. .	205 0503	973 0095	249 2319	3950
20 Mar. (79)	4 Wed.	15 43 25	27 Feb (58)	4 Wed. .	80 7732	820 2535	218 4088	3951
20 Mar (79)	5 Thur	21 55 34	18 Mar (77)	3 Tues. .	115 4556	756 2470	269 6192	3952
21 Mar (80)	0 Sat. .	4 7 43	7 Mar (66)	0 Sat. .	9991 1784	603 4911	238 7960	3953
20 Mar (80)	1 Sun. .	10 19 52	24 Feb (55)	4 Wed. .	9866 9013	450 7353	207·9727	3954
20 Mar (79)	2 Mon.	16 32 1	14 Mar. (73)	3 Tues.	9900·5837	386 7286	259 2832	3955
20 Mar. (79)	3 Tues. .	22 49 10	3 Mar (62)	0 Sat. .	9777 3065	233 9727	228 4600	3956
21 Mar (80)	5 Thur.	4 56 19	21 Feb (52)	5 Thur	9991 6613	117 5084	200 3745	3957
20 Mar (80)	6 Fri. .	11 8 28	11 Mar. (71)	4 Wed. .	26 3437	53 5018	251·6849	3958
20 Mar (79)	0 Sat. .	17 20 37	1 Mar. (60)	2 Mon. .	240·4285	937 0375	223 5995	3959
20 Mar. (79)	1 Sun. .	23 32 45	20 Mar. (79)	1 Sun. .	275 3809	873·0310	274·9100	3960
21 Mar (80)	3 Tues.	5 44 54	9 Mar. (68)	5 Thur	151 1038	720·2751	244 0867	3961
20 Mar (80)	4 Wed.	11 57 3	26 Feb (57)	2 Mon. .	26 8266	567·5191	213 2835	3962
20 Mar (79)	5 Thur	18 9 12	16 Mar. (75)	1 Sun. .	61 5090	503 5126	264 5739	3963
21 Mar (80)	0 Sat. .	0 21 21	5 Mar. (64)	5 Thur.	9937 2318	350·7566	233 5708	3964
21 Mar (80)	1 Sun. .	6 33 30	22 Feb (53)	2 Mon. .	9812 9547	198 0007	202·9275	3965
20 Mar (80)	2 Mon. .	12 45 39	12 Mar (72)	1 Sun. .	9847 6371	132 9941	254 2379	3966
20 Mar. (79)	3 Tues .	18 57 48	2 Mar (61)	6 Fri. .	61 9919	17·5299	226 1525	3967
21 Mar (80)	5 Thur.	1 9 57	19 Feb (50)	3 Tues. .	9937 7149	864 7741	195 8293	3968
21 Mar (80)	6 Fri. .	7 22 6	11 Mar (70)	3 Tues. .	311 0291	837 0590	249 3775	3969
20 Mar. (80)	0 Sat. .	13 34 15	28 Feb (59)	0 Sat. .	186 7519	684 3031	218 5543	3970
20 Mar (79)	1 Sun. .	19 46 24	18 Mar (77)	6 Fri .	221 4343	620·2965	269 8647	3971
21 Mar (80)	3 Tues	1 58 33	7 Mar (66)	3 Tues. .	97 1572	467 5406	239 0416	3972

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali.
Day and month A. D.	Week-day	Time of true Mĕsha saṁ-krānti	Day and month A. D.	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M. S						
21 Mar (80)	4 Wed	8 10 42	24 Feb (55)	0 Sat	9972 8801	313 7846	208 2183	3973
20 Mar. (80)	5 Thur .	14 22 51	14 Mar. (74)	6 Fri .	7 5624	250 7781	259 5087	3974
20 Mar (79)	6 Fri .	20 35 0	3 Mar (62)	3 Tues	9883 2853	98 0222	228 7055	3975
21 Mar (80)	1 Sun	2 47 9	21 Feb (52)	1 Sun. .	97·6401	981 5579	200 6101	3976
21 Mar (80)	2 Mon.	8 59 18	12 Mar (71)	0 Sat	132 3224	917 5514	251 9305	3977
20 Mar (80)	3 Tues .	15 11 27	29 Feb (60)	4 Wed	8 0453	764 7954	221 1072	3978
20 Mar (79)	4 Wed	21 23 36	19 Mar (78)	3 Tues	42 7277	700 7889	272 4177	3979
21 Mar. (80)	6 Fri .	3 35 45	8 Mar (67)	0 Sat .	9918 4506	548 0330	241 5146	3980
21 Mar (80)	0 Sat	9 47 54	26 Feb. (57)	5 Thur	132 8053	431 5686	213 5091	3981
20 Mar (80)	1 Sun .	16 0 3	15 Mar. (75)	3 Tues	9828 8558	331 2705	262 0817	3982
20 Mar. (79)	2 Mon	22 12 12	5 Mar (64)	1 Sun	43 2106	214 8061	234 0013	3983
21 Mar (80)	4 Wed	4 24 21	22 Feb (53)	5 Thur	9918 9335	62 0502	203 1731	3984
21 Mar (80)	5 Thur	10 36 30	13 Mar (72)	4 Wed	9953 6158	998 0436	254 4835	3985
20 Mar (80)	6 Fri .	16 48 39	2 Mar (62)	2 Mon	167 9707	881 5794	226 3980	3986
20 Mar (79)	0 Sat .	23 0 48	19 Feb. (50)	6 Fri	43 6936	728 9235	195 5748	3987
21 Mar (80)	2 Mon .	5 12 57	10 Mar (69)	5 Thur	78 3759	664 8169	246 7165	3988
21 Mar (80)	3 Tues	11 25 6	27 Feb (58)	2 Mon	9954 0987	512 0610	216 0621	3989
20 Mar (80)	4 Wed	17 37 15	17 Mar (77)	1 Sun. .	9988 7811	448 0544	267 3724	3990
20 Mar (79)	5 Thur	23 49 24	6 Mar (65)	5 Thur.	9864 5040	294 2984	236 5493	3991
21 Mar (80)	0 Sat .	6 1 33	23 Feb (54)	2 Mon	9740 2268	142 5426	205 7261	3992
21 Mar (80)	1 Sun	12 13 42	14 Mar (73)	1 Sun.	9774 9092	78 5360	257 0365	3993
20 Mar (80)	2 Mon	18 25 51	3 Mar (63)	6 Fri	9989 2641	962 0717	228 9510	3994
21 Mar (80)	4 Wed	0 38 0	21 Feb (52)	4 Wed. .	203 6198	845 6075	200 6968	3995
21 Mar. (80)	5 Thur .	6 50 9	12 Mar (71)	3 Tues	238 3012	781·6009	252 0073	3996
21 Mar. (80)	6 Fri. .	31 2 18	1 Mar (60)	0 Sat	114 0241	628 8449	221 3528	3997

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COMMENCEMENT OF THE								Kali.
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					
Day and month A D	Week-day	Time of true Mĩsha-saṁ-krānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
20 Mar (80)	0 Sat	19 14 27	19 Mar. (79)	6 Fri	148 7064	564 8384	272 6632	3998
21 Mar (80)	2 Mon	1 26 36	8 Mar (67)	3 Tues	24 4293	412 0825	241 8401	3999
21 Mar (80)	3 Tues	7 38 45	25 Feb (56)	0 Sat	9900 1522	259 3266	211 0169	4000
21 Mar (80)	4 Wed	13 50 54	16 Mar (75)	6 Fri	9934 8345	195 3200	262 3050	4001
20 Mar (80)	5 Thur	20 3 3	4 Mar (64)	3 Tues	9810 5573	42 5640	231 4818	4002
21 Mar (80)	0 Sat	2 15 12	22 Feb (53)	1 Sun	24 9122	926 0997	203 3963	4003
21 Mar (80)	1 Sun	8 27 21	13 Mar (72)	0 Sat	59 5945	862 0930	254 7067	4004
21 Mar (80)	2 Mon	14 29 29	3 Mar (62)	5 Thur	273 9494	745 6289	226 6213	4005
20 Mar (80)	3 Tues	20 51 38	20 Mar (80)	3 Tues	9969 9998	645 3307	275 1940	4006
21 Mar (80)	5 Thur	3 3 47	10 Mar (69)	1 Sun	184 3546	528 8665	247 1085	4007
21 Mar (80)	6 Fri	9 15 56	27 Feb (58)	5 Thur	60 0774	376 1105	216 2853	4008
21 Mar (80)	0 Sat	15 28 5	17 Mar (76)	3 Tues	9756 1279	275 8123	264 8570	4009
20 Mar (80)	1 Sun	21 40 14	6 Mar (66)	1 Sun	9970 4827	159 3479	236 7726	4010
21 Mar (80)	3 Tues	3 52 23	23 Feb (54)	5 Thur	9846 2055	6 5921	205 9493	4011
21 Mar (80)	4 Wed	10 4 32	14 Mar (73)	4 Wed	9880 8879	942 5855	257 2597	4012
21 Mar (80)	5 Thur	16 16 41	4 Mar (63)	2 Mon	95 2428	826 1212	229 1743	4013
20 Mar (80)	6 Fri	22 28 50	22 Feb (53)	0 Sat	309 5975	709 6569	201 0889	4014
21 Mar (80)	1 Sun	4 40 59	11 Mar (70)	5 Thur	5 6479	609 3587	249 6615	4015
21 Mar (80)	2 Mon	10 53 8	28 Feb (59)	2 Mon	9881 3708	456 6028	218 8383	4016
21 Mar (80)	3 Tues	17 5 17	19 Mar (78)	1 Sun	9916 0531	392 5962	270-1487	4017
20 Mar (80)	4 Wed.	23 17 26	7 Mar (67)	5 Thur.	9791 7760	239 8403	239 3256	4018
21 Mar. (80)	6 Fri	5 29 35	25 Feb (56)	3 Tues	6 1309	123 3760	211 2401	4019
21 Mar (80)	0 Sat	11 41 44	16 Mar. (75)	2 Mon	40 8133	59 3695	262 5505	4020
21 Mar (80)	1 Sun	17 53 53	5 Mar (64)	6 Fri	9916 5360	906 6135	231 6273	4021
21 Mar. (81)	3 Tues.	0 6 2	23 Feb (54)	4 Wed	130 8909	790 1493	203 6419	4022

TABLE

							JOVIAN SAMVATSARA		Intercalated (adhika) and suppressed (kshaya) true lunar months
Kali	Saka.	Chaitrādi Vikrama	Māshādi solar year in Bengal	Kollam	A D	Southern system	Northern system		
1	2	3	3a	4	5	6		7	8
4023	844	979	328	96 97	921-22	15 Vṛisha . .	16 Chitrabhānu .		
4024	845	980	329	97 98	922-23	16 Chitrabhānu .	17 Subhānu		7 Āśvina .
4025	846	981	330	98-99	923 24	17 Subhānu .	18 Tārana .		
4026	847	982	331	99 100	*924-25	18 Tārana .	19 Pārthiva .		
4027	848	983	332	100 01	925 26	19 Pārthiva .	20 Vyaya .		5 Śrāvaṇa .
4028	849	984	333	101-02	926 27	20 Vyaya .	21 Sarvajit		
4029	850	985	334	102-03	927-28	21 Sarvajit	22 Sarvadhārin .		
4030	851	986	335	103 04	*928-29	22 Sarvadhārin	23 Virōdhin .		3 Jyēshṭha .
4031	852	987	336	104-05	929 30	23 Virōdhin .	24 Vikṛita		
4032	853	988	337	105 06	930 31	24 Vikṛita .	25 Khara .		.
4033	854	989	338	106 07	931-32	25 Khara	26 Nandana		2 Vaiśākha .
4034	855	990	339	107-08	*932 33	26 Nandana	27 Vijaya		.
4035	856	991	340	108 09	933 34	27 Vijaya .	28 Jaya		6 Bhādrapada
4036	857	992	341	109-10	934-35	28 Jaya	29 Manmatha		.
4037	858	993	342	110-11	935 36	29 Manmatha	30 Durmukha .		.
4038	859	994	343	111-12	*936-37	30 Durmukha .	31 Hēmalamba .		4 Āshāḍha .
4039	860	995	344	112-13	937-38	31 Hēmalamba .	32 Vilamba .		
4040	861	996	345	113-14	938 39	32 Vilamba .	33 Vikārin .		
4041	862	997	346	114-15	939-40	33 Vikārin .	34 Śārvarin .		3 Jyēshṭha .
4042	863	998	347	115-16	*940 41	34 Śārvarin	35 Plava .		
4043	864	999	348	116 17	941-42	35 Plava . .	36 Subhakṛit .		7 Āśvina .
4044	865	1000	349	117-18	942 43	36 Subhakṛit .	37 Sōbhana .		
4045	866	1001	350	118-19	943 44	37 Sōbhana	38 Krōdhin .		
4046	867	1002	351	119 20	*944 45	38 Krōdhin .	39 Viśvāvasu .		5 Śrāvaṇa .
4047	868	1003	352	120 21	945-46	39 Viśvāvasu	40 Parābhava .		.

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COMMENCEMENT OF THE									
SOLAR YEAR.			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)						Kali
Day and month A D	Week-day	Time of true Mésha-saṁ krānti	Day and month A D	Week-day	a	b	c		
13	14	17	19	20	23	24	25		1
		H M S							
21 Mar (80)	4 Wed	6 18 11	13 Mar (72)	3 Tues	165 5733	726 1427	254 9523		4023
21 Mar (80)	5 Thur	12 30 20	2 Mar (61)	0 Sat	41 2961	573 3868	224 1290		4024
21 Mar (80)	6 Fri	18 42 29	21 Mar (80)	6 Fri	75 9785	509 3802	275 4395		2025
21 Mar (81)	1 Sun	0 54 38	9 Mar (69)	3 Tues	9951 7014	356 6243	244 6163		4026
21 Mar (80)	2 Mon	7 6 47	26 Feb (57)	0 Sat	9827 4242	203 8683	213 7931		4027
21 Mar (80)	3 Tues	13 18 56	17 Mar (76)	6 Fri	9862 0966	139 8618	265 1034		4028
21 Mar (80)	4 Wed	19 31 5	7 Mar (66)	4 Wed	76 4614	23 3975	237 0181		4029
21 Mar (81)	6 Fri	1 43 14	24 Feb (55)	1 Sun	9952 1843	870 6416	206 1949		4030
21 Mar (80)	0 Sat	7 55 23	14 Mar (73)	0 Sat	9986 8666	806 6351	257 5053		4031
21 Mar (80)	1 Sun	14 7 32	4 Mar (63)	5 Thur	201 2215	690 1707	229 4198		4032
21 Mar (80)	2 Mon	20 19 41	21 Feb (52)	2 Mon	76 9443	537 4148	198 5966		4033
21 Mar (81)	4 Wed	2 31 50	11 Mar (71)	1 Sun	111 6267	473 4083	249 9071		4034
21 Mar (80)	5 Thur	8 43 59	28 Feb (59)	5 Thur	9987 3495	320 6523	219 0839		4035
21 Mar (80)	6 Fri	14 56 8	19 Mar (78)	4 Wed	22 0319	256 6458	270 3942		4036
21 Mar (80)	0 Sat	21 8 17	8 Mar (67)	1 Sun	9897 7548	103 8898	239 5711		4037
21 Mar (81)	2 Mon	3 20 26	26 Feb (57)	6 Fri	112 1097	987 4256	211 4857		4038
21 Mar (80)	3 Tues	9 32 35	16 Mar (75)	5 Thur	146 7920	923 4190	262 7961		4039
21 Mar (80)	4 Wed	15 44 44	5 Mar (64)	2 Mon	22 5148	770 6630	231 9729		4040
21 Mar (80)	5 Thur	21 56 53	23 Feb (54)	0 Sat	236 8697	654 1988	203 8874		4041
21 Mar (81)	0 Sat	4 9 2	12 Mar (72)	5 Thur	9932 9200	553 9006	252 4601		4042
21 Mar (80)	1 Sun	10 21 11	1 Mar (60)	2 Mon	9808 6429	401 1447	221 6368		4043
21 Mar (80)	2 Mon	16 33 20	20 Mar (79)	1 Sun	9843 3253	337 1381	272 0473		4044
21 Mar (80)	3 Tues	22 45 29	9 Mar (68)	5 Thur	9719 0482	184 3821	242 1240		4045
21 Mar (81)	5 Thur	4 57 38	27 Feb (58)	3 Tues	9933 4029	67 9178	214 0386		4046
21 Mar (80)	6 Fri	11 9 47	17 Mar (76)	2 Mon	9968 0854	3 9113	265 3490		4047

CONCURRENT YEAR								Intercalated (adhika) and suppressed (kshaya) true lunar months
						JOVIAN SAMVATSARA		
Kalı	Śaka	Chaitrādi Vikrama	Mēshadi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4048	869	1004	353	121-22	946 47	40 Parābhava	41 Plavanga	
4049	870	1005	354	122-23	947-48	41 Plavanga	42 Kīlaka	3 Jyēshtha
4050	871	1006	355	123 24	*948-49	42 Kīlaka	43 Saumya	...
4051	872	1007	356	124 25	949-50	43 Saumya	44 Sādhārana	
4052	873	1008	357	125 26	950 51	44 Sādhārana	45 Virōdhakṛit	1 Chaitra
4053	874	1009	358	126 27	951-52	45 Virōdhakṛit	46 Parıdhāvin	
4054	875	1010	359	127-28	*952 53	46 Parıdhāvin	47 Pramādın	5 Śrāvana
4055	876	1011	360	128 29	953 54	47 Pramādın	48 Ānanda	
4056	877	1012	361	129 30	954 55	48 Ānanda	49 Rākshasa	
4057	878	1013	362	130 31	955 56	49 Rākshasa	50 Anala	4 Āshādha
4058	879	1014	363	131 32	*956 57	50 Anala	51 Pıngala	
4059	880	1015	364	132-33	957-58	51 Pıngala	52 Kālayukta	
4060	881	1016	365	133 34	958 59	52 Kālayukta	53 Sıddhārthın	3 Jyēshtha
4061	882	1017	366	134-35	959-60	53 Sıddhārthın	54 Raudra	
4062	883	1018	367	135 36	*960 61	54 Raudra	55 Durmatı	7 Āśvina
4063	884	1019	368	136 37	961 62	55 Durmatı	56 Dundubhı	
4064	885	1020	369	137 38	962-63	56 Dundubhı	57 Rudhırōdgārın	
4065	886	1021	370	138 39	963-64	57 Rudhırōdgārın	58 Raktāksha	4 Āshādha†
4066	887	1022	571	139 40	*964 65	58 Raktāksha	59 Krōdhana	...
4067	888	1023	372	140 41	965 66	59 Krōdhana	60 Kshaya	
4068	889	1024	373	141 42	966 67	60 Kshaya	1 Prabhava	3 Jyēshtha
4069	890	1025	374	142 43	967-68	1 Prabhava	2 Vıbhava	
4070	891	1026	375	143 44	*968 69	2 Vıbhava	3 Śukla	12 Phālguna†
4071	892	1027	376	144 45	969-70	3 Śukla	4 Pramōda	
4072	893	1028	377	145-46	970-71	4 Pramōda	5 Prajāpatı	

† See "Remarks" above, on the page preceding the Table

LXXXII—*Contd*

COMMENCEMENT OF THE								
Solar year.			Luni-solar year (mean sunrise of civil day on which Chaitra Śukla 1 ends).					Kali
Day and month A. D	Week-day	Time of true Mesha sath kranti	Day and month, A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
21 Mar (80)	0 Sat .	17 21 56	7 Mar (66)	0 Sat	182 4402	887 4470	237 2637	4048
21 Mar (80)	1 Sun	23 34 5	24 Feb (55)	4 Wed	58 1630	734 6910	206 4404	4049
21 Mar (81)	3 Tues	5 46 13	14 Mar (74)	3 Tues	92 8454	670 0846	257 7508	4050
21 Mar (80)	4 Wed	11 58 22	3 Mar (62)	0 Sat	9968 5683	517 9286	226 9276	4051
21 Mar (80)	5 Thur	18 10 31	20 Feb (51)	4 Wed	9844 3112	365 1727	196 1044	4052
22 Mar (81)	0 Sat	0 22 40	11 Mar (70)	3 Tues	9878 9735	301 1662	247 4148	4053
21 Mar (81)	1 Sun	6 34 49	28 Feb (59)	0 Sat	9754 6963	148 4102	216 5916	4054
21 Mar (80)	2 Mon	12 46 58	18 Mar (77)	6 Fri .	9789 3787	84 4037	267 9020	4055
21 Mar (80)	3 Tues	18 59 7	8 Mar (67)	4 Wed	3 7335	967 9394	239 8167	4056
22 Mar (81)	5 Thur	1 11 16	26 Feb (57)	2 Mon	218 0884	851 4750	211 7312	4057
21 Mar (81)	6 Fri .	7 23 25	16 Mar (76)	1 Sun	252 7708	787 4685	263 0416	4058
21 Mar (80)	0 Sat .	13 35 34	5 Mar (64)	5 Thur	128 4936	634 7125	232 2184	4059
21 Mar (80)	1 Sun .	19 47 43	22 Feb (53)	2 Mon	4 2164	481 9566	201 3952	4060
22 Mar (81)	3 Tues	1 59 52	13 Mar (72)	1 Sun .	38 8988	417 9502	252 7056	4061
21 Mar (81)	4 Wed	8 12 1	1 Mar (61)	5 Thur	9914 6217	265 1942	221 8823	4062
21 Mar (80)	5 Thur	14 24 10	20 Mar (79)	4 Wed	9949 3040	201 1877	273 1828	4063
21 Mar (80)	6 Fri	20 36 19	9 Mar (68)	1 Sun	9825 0269	48 5316	242 3696	4064
22 Mar (81)	1 Sun	2 48 28	27 Feb (58)	6 Fri	39 3817	931 9674	214 2842	4065
21 Mar (81)	2 Mon	9 0 37	17 Mar (77)	5 Thur	74 0042	867 9608	265 5946	4066
21 Mar (80)	3 Tues	15 12 46	7 Mar (66)	3 Tues.	288 4189	751 4956	237 5093	4067
21 Mar (80)	4 Wed	21 24 55	24 Feb (55)	0 Sat .	.164 1418	598 7406	206 6860	4068
22 Mar (81)	6 Fri	3 37 4	15 Mar (74)	6 Fri .	198 8042	534 7341	257 9964	4069
21 Mar (81)	0 Sat	9 49 13	3 Mar (63)	3 Tues	74 5470	381 9782	227 1731	4070
21 Mar (80)	1 Sun	16 1 22	21 Mar (80)	1 Sun	9770 5974	281 6799	275 7453	4071
21 Mar (80)	2 Mon	22 13 31	11 Mar (70)	6 Fri	9984 9522	616 2156	247 6604	4072

TABLE

						JOVIAN SAMVATSARA		Intercalated (adhika) and suppressed (kshaya) true lunar months.
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system.	
1	2	3	3a	4	5	6	7	8
4073	894	1029	378	146 47	971 72	5 Prajāpati	6 Aṅgiras	5 Śrāvana
4074	895	1030	379	147-48	*972 73	6 Aṅgiras	7 Śrimukha	.
4075	896	1031	380	148 49	973 74	7 Śrimukha	8 Bhāva .	.
4076	897	1032	381	149 50	974-75	8 Bhāva	9 Yuvan	4 Āshāḍha
4077	898	1033	382	150 51	975-76	9 Yuvan	10 Dhātṛi .	.
4078	899	1034	383	151 52	*976 77	10 Dhātṛi	11 Īśvara .	.
4079	900	1035	384	152 53	977-78	11 Īśvara .	12 Bahudhānya	2 Vaiśākha
4080	901	1036	385	-153 54	978 79	12 Bahudhānya .	13 Pramāthin	.
4081	902	1037	386	154-55	979 80	13 Pramāthin	14 Vikrama	6 Bhādrapada
4082	903	1038	387	155-56	*980 81	14 Vikrama	15 Vṛisha .	.
4083	904	1039	388	156 57	981 82	15 Vṛisha	16 Chitrabhānu .	.
4084	905	1040	389	157 58	982-83	16 Chitrabhānu .	17 Subhānu	4 Āshāḍha††
4085	906	1041	390	158 59	983 84	17 Subhānu	18 Tārana	.
4086	907	1042	391	159 60	*984 85	18 Tārana	19 Pārthiva	.
4087	908	1043	392	160 61	985 86	19 Pārthiva	20 Vyaya .	3 Jyēshtha
4088	909	1044	393	161 62	986 87	20 Vyaya .	21 Sarvajit	.
4089	910	1045	394	162 63	987-88	21 Sarvajit	22 Sarvadhārin	
4090	911	1046	395	163 64	*988 89	22 Sarvadhārin	23 Virōdhin	1 Chaitra
4091	912	1047	396	164 65	989-90	23 Virōdhin .	24 Vikṛita†	.
4092	913	1048	397	165-66	990 91	24 Vikṛita .	26 Nandana	5 Śrāvana
4093	914	1049	398	166 67	991 92	25 Khara	27 Vijaya	.
4094	915	1050	399	167 68	*992 93	26 Nandana	28 Jaya	
4095	916	1051	400	168 69	993 94	27 Vijaya .	29 Manmatha	4 Āshāḍha
4096	917	1052	401	169-70	994-95	28 Jaya	30 Durmukha	
4097	918	1053	402	170 71	995 96	29 Manmatha	31 Hēmalamba	..

† 25 Khara was suppressed in the north
†† See " Remarks " on page preceding the Table.

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COMMENCEMENT OF THE								
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kal.
Day and month A D	Week-day	Time of true Mêsha saṁkrânti	Day and month A D.	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M. S						
22 Mar (81)	4 Wed	4 25 40	28 Feb. (59)	3 Tues	9860 6751	12 45ſ¯	217 8372	4073
21 Mar. (81)	5 Thur	10 37 49	18 Mar (78)	2 Mon. .	9895 3574	948 4532	268 0475	4074
21 Mar (80)	6 Fri	16 49 58	8 Mar (67)	0 Sat .	109 7123	831 9889	240 0622	4075
21 Mar (80)	0 Sat	23 2 7	25 Feb (56)††	4 Wed.	9985 4352	679 2320	209 2390	4076
22 Mar (81)	2 Mon. .	5 14 16	16 Mar. (75)	3 Tues. .	20 1175	615 2264	200 5494	4077
21 Mar (81)	3 Tues	11 26 25	4 Mar (64)	0 Sat. .	9895 8404	462·4704	229 7261	4078
21 Mar (80)	4 Wed	17 38 34	21 Feb (52)	4 Wed ·	9771 5632	309 7145	198 9029	4079
21 Mar (80)	5 Thur	23 50 43	12 Mar (71)	3 Tues ·	9806 2456	245 7080	250 2134	4080
22 Mar (81)	0 Sat .	6 2 52	2 Mar (61)	1 Sun ·	20 6004	129 2437	222 1279	4081
21 Mar (81)	1 Sun	12 15 1	20 Mar (80)	0 Sat	55 2828	65 2372	273 4383	4082
21 Mar (80)	2 Mon	18 27 10	9 Mar (68)	4 Wed ·	9931 0057	912 4811	242 6151	4083
22 Mar (81)	4 Wed	0 39 19	27 Feb (58)	2 Mon ·	145 3605	796 0169	214 5298	4084
22 Mar (81)	5 Thur	6 51 28	18 Mar (77)	1 Sun ·	180 0429	732 0103	265 8401	4085
21 Mar (81)	6 Fri	13 3 37	6 Mar (66)	5 Thur, ·	55 7657	579 2544	235 0169	4086
21 Mar (80)	0 Sat .	19 15 46	23 Feb (54)	2 Mon ·	9931 4886	426 4985	204 1937	4087
22 Mar (81)	2 Mon	1 27 55	11 Mar (73)	1 Sun ·	9966 1709	362 4919	255 5042	4088
22 Mar (81)	3 Tues	7 40 4	3 Mar (62)	5 Thur	9841 8938	209 7360	224 6809	4089
21 Mar. (81)	4 Wed	13 52 13	21 Feb (52)	3 Tues	56 2487	93 2717	196 5954	4090
21 Mar (80)	5 Thur	20 4 22	11 Mar (70)	2 Mon	90 8310	29 2651	247 9059	409
22 Mar (81)	0 Sat	2 16 31	28 Feb (59)	6 Fri	9966 0538	876 5093	217 0828	4092
22 Mar. (81)	1 Sun .	8 28 40	19 Mar (78)	5 Thur	1 3372	812 5027	268 3931	4093
21 Mar (81)	2 Mon·	14 40 49	8 Mar (68)	3 Tues	213 6911	696 0384	240 3077	4094
21 Mar (80)	3 Tues	20 52 58	25 Feb (56)	0 Sat	91 4130	543 2825	209 4845	4095
22 Mar (81)	5 Thur	3 5 6	16 Mar (75)	6 Fri	126 0953	479 2759	260 7950	4096
22 Mar (81)	6 Fri .	9 17 15	5 Mar (64)	3 Tues	1 8192	326 5199	229 97ₓ7	4097

†† See " Remarks " on page preceding the Table.

TABLE

						CONCURRENT YEAR.			
							Jovian Samvatsara		Intercalated (adhika) and suppressed (kshaya) true lunar months
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D.	Southern system.	Northern system		
1	2	3	3a	4	5	6	7		8
4098	919	1054	403	171-72	*996 97	30 Durmukha	32 Vilamba		2 Vaiśākha
4099	920	1055	404	172-73	997-98	31 Hēmalamba	33 Vikārin		...
4100	921	1056	405	173 74	998 99	32 Vilamba	34 Śārvarin		6 Bhādrapada
4101	922	1057	406	174 75	999 1000	33 Vikārin	35 Plava		
4102	923	1058	407	175-76	*1000 01	34 Śārvarin	36 Subhakṛit		
4103	924	1059	408	176 77	1001-02	35 Plava	37 Śōbhana		5 Śrāvana†
4104	925	1060	409	177-78	1002 03	36 Subhakṛit	38 Krōdhin		
4105	926	1061	410	178-79	1003 04	37 Śōbhana	39 Viśvāvasu		
4106	927	1062	411	179 80	*1004 05	38 Krōdhin	40 Parābhava		3 Jyēshtha
4107	928	1063	412	180-81	1005 06	39 Viśvāvasu	41 Plavanga		
4108	929	1064	413	181 82	1006 07	40 Parābhava	42 Kilaka		{ 8 Kārttika } { 9 Mārgas (ksh) }
4109	930	1065	414	182 83	1007 08	41 Plavanga	43 Saumya		1 Chaitra
4110	931	1066	415	183 84	*1008 09	42 Kilaka	44 Sādhārana		
4111	932	1067	416	184 85	1009-10	43 Saumya	45 Virōdhakṛit		5 Śrāvana
4112	933	1068	417	185-86	1010 11	44 Sādhārana	46 Paridhāvin		
4113	934	1069	418	186 87	1011-12	45 Virōdhakṛit	47 Pramādin		
4114	935	1070	419	187 88	*1012-13	46 Paridhāvin	48 Ānanda		4 Āshādha
4115	936	1071	420	188 89	1013 14	47 Pramādin	49 Rākshasa		
4116	937	1072	421	189-90	1014-15	48 Ānanda	50 Anala		
4117	938	1073	422	190 91	1015-16	49 Rākshasa	51 Pingala		2 Vaiśākha
4118	939	1074	423	191-92	*1016-17	50 Anala	52 Kālayukta		
4119	940	1075	424	192 93	1017 18	51 Pingala	53 Siddhārthin		6 Bhādrapada
4120	941	1076	425	193 94	1018 19	52 Kālayukta	54 Raudra		
4121	942	1077	426	194 95	1019 20	53 Siddhārthin	55 Durmati		
4122	943	1078	427	195 96	*1020 21	54 Raudra	56 Dundubhi		5 Śrāvana†

† See " Remarks " on page preceding the Table

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COMMENCEMENT OF THE								Kali
Solar Year			Luni-solar Year (Mean Sunrise of Civil Day on which Chaitra Sukla 1 ends)					
Day and month A D	Week-day	Time of true Mēsha saṁkrānti	Day and month A D	Week day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
21 Mar (81)	0 Sat .	15 29 24	22 Feb (53)	0 Sat	9877 5419	173 7640	199 1484	4098
21 Mar (80)	1 Sun .	21 41 33	12 Mar (71)	6 Fri	9912 2243	109 7575	251 4589	4099
22 Mar (81)	3 Tues	3 53 42	2 Mar (61)	4 Wed .	126 5792	993 2933	222 3735	4100
22 Mar (81)	4 Wed .	10 5 51	21 Mar (80)	3 Tues	161 2616	929 2867	273 6618	4101
21 Mar (81)	5 Thur	16 18 0	9 Mar (69)	0 Sat	36 9845	776 5307	242 8385	4102
21 Mar (80)	6 Fri	22 30 9	27 Feb (58)	5 Thur	251 3393	660 0064	214 7531	4103
22 Mar (81)	1 Sun .	4 42 18	17 Mar (76)	3 Tues	0947 3897	559 7683	263 3257	4104
22 Mar (81)	2 Mon	10 54 27	6 Mar (65)	0 Sat	9823 1125	407 0122	232 5025	4105
21 Mar (81)	3 Tues	17 6 36	24 Feb (55)	5 Thur	37 4674	290 5480	204 4171	4106
21 Mar (80)	4 Wed	23 18 45	13 Mar (72)	3 Tues	9733 5177	190 2498	253 9897	4107
22 Mar (81)	6 Fri .	5 30 54	3 Mar (62)	1 Sun .	9947 8726	73 7855	224 9042	4108
22 Mar (81)	0 Sat .	11 43 3	21 Feb (52)	6 Fri	162 2275	957 3273	196 8189	4109
21 Mar (81)	1 Sun	17 55 12	11 Mar (71)	5 Thur	196 9097	893 3146	248 1293	4110
22 Mar (81)	3 Tues	0 7 21	28 Feb (59)	2 Mon	72 6326	740 5588	217 3061	4111
22 Mar (81)	4 Wed	6 19 30	19 Mar (78)	1 Sun	107 3140	676 5522	268 6164	4112
22 Mar (81)	5 Thur	12 31 39	8 Mar (67)	5 Thur	9983 0379	523 7962	237 7933	4113
21 Mar (81)	6 Fri .	18 43 48	25 Feb (56)	2 Mon	9858 7607	371 0403	206 9701	4114
22 Mar (81)	1 Sun	0 55 57	15 Mar (74)	1 Sun .	9893 4431	307 0338	258 2805	4115
22 Mar (81)	2 Mon .	7 8 6	4 Mar (63)	5 Thur	9769 1660	154 2779	227 4572	4116
22 Mar (81)	3 Tues	13 20 15	22 Feb (53)	3 Tues	9983 5207	37 8125	199 3718	4117
21 Mar (81)	4 Wed	19 32 24	12 Mar (72)	2 Mon	18 2031	973 8070	250 6823	4118
22 Mar (81)	6 Fri .	1 44 33	2 Mar (61)	0 Sat	232 5580	857 3427	222 5968	4119
22 Mar (81)	0 Sat .	7 56 42	21 Mar (80)	6 Fri	267 2404	793 3362	273 9072	4120
22 Mar (81)	1 Sun	14 8 51	10 Mar (69)	3 Tues	142 9632	640 5802	243 0840	4121
21 Mar (81)	2 Mon	20 21 0	27 Feb (58)	0 Sat	18 6860	487·8243	212 2609	4122

TABLE

						Jovian Samvatsara		Intercalated (adhika) and suppressed (kshaya) true lunar months
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam.	Á D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4123	944	1079	428	196-97	1021-22	55 Durmati	57 Rudhirōdgārın	...
4124	945	1080	429	197-98	1022 23	56 Dundubhı	58 Raktāksha	.
4125	946	1081	430	198-99	1023-24	57 Rudhírōdgārın	59 Krōdhana	3 Jyćshṭha .
4126	947	1082	431	199 200	*1024-25	58 Raktāksha	60 Kshaya	.
4127	948	1083	432	200-01	1025 26	59 Krōdhana	1 Prabhava	{ 7 Āśvina } { 10 Pausha (Lsh) }
4128	949	1084	433	201-02	1026-27	60 Kshaya	2 Víbhava	1 Chaitra
4129	950	1085	434	202 03	1027-28	1 Prabhava	3 Śukla	.
4130	951	1086	435	203 04	*1028-29	2 Vibhava	4 Pramōda	5 Śrāvana
4131	952	1087	436	204-05	1029-30	3 Śukla	5 Prajāpatı	
4132	953	1088	437	205 06	1030 31	4 Pramōda	6 Angıras	
4133	954	1089	438	206 07	1031 32	5 Prajāpatı	7 Śrīmukha	3 Jyēshṭha .
4134	955	1090	439	207-08	*1032-33	6 Angıras	8 Bhāva	.
4135	956	1091	440	208 09	1033 34	7 Śrímukha	9 Yuvan	
4136	957	1092	441	209-10	1034 35	8 Bhāva	10 Dhātṛı	2 Vaıśākha
4137	958	1093	442	210 11	1035-36	9 Yuvań	11 Íśvara	
4138	959	1094	443	211-12	*1036 37	10 Dhātṛı .	12 Bahudhānya	6 Bhādrapada
4139	960	1095	444	212-13	1037 38	11 Íśvara	13 Pramāthın	
4140	961	1096	445	213 14	1038 39	12 Bahudhānya	14 Vıkrama	..
4141	962	1097	446	214-15	1039-40	13 Pramāthın	15 Vṛısha	4 Āshāḍha
4142	963	1098	447	215-16	*1040 41	14 Vıkrama	16 Chıtrabhānu	
4143	964	1099	448	216-17	1041 42	15 Vṛısha .	17 Subhānu	
4144	965	1100	449	217-18	1042-43	16 Chítrabhānu	18 Tārana	3 Jyēshṭha .
4145	966	1101	450	218-19	1043-44	17 Subhānu	19 Pārthıva	
4146	967	1102	451	219 20	*1044-45	18 Tārana .	20 Vyaya	7 Āśvına .
4147	968	1103	452	220-21	1045-46	19 Pārthıva	21 Sarvajıt	

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	COMMENCEMENT OF THE							
	SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)				Kali
Day and month A D.	Week-day	Time of true Mêsha sam krānti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
22 Mar (81)	4 Wed.	2 33 9	17 Mar (76)	6 Fri	53 3685	423 8178	263 3090	4123
22 Mar (81)	5 Thur	8 45 18	6 Mar (65)	3 Tues	9929·0902	271 0618	232 7480	4124
22 Mar (81)	6 Fri	14 57 27	23 Feb (54)	0 Sat	9804 8141	118 3068	201 9238	4125
21 Mar (81)	0 Sat .	21 9 36	13 Mar (72)	6 Fri	9839 4965	54 2993	253 2353	4126
22 Mar (81)	2 Mon	3 21 45	3 Mar (62)	1 Wed	53 8514	937 8350	225 0498	4127
22 Mar (81)	3 Tues	9 33 54	21 Feb (52)	2 Mon	268 2062	821 3708	197 0643	4128
22 Mar (81)	4 Wed	15 46 3	12 Mar (71)	1 Sun	302 8985	757 3642	248 3748	4129
21 Mar (81)	5 Thur .	21 58 12	29 Feb (60)	5 Thur	178 6114	604 6082	217 5517	4130
22 Mar (81)	0 Sat	4 10 21	19 Mar (78)	4 Wed	213 2937	540 6018	268 8620	4131
22 Mar (81)	1 Sun	10 22 30	8 Mar (67)	1 Sun.	89 0166	387 8457	238 0388	4132
22 Mar (81)	2 Mon	16 34 39	25 Feb (56)	5 Thur	9964 7395	235 0898	207 2156	4133
21 Mar (81)	3 Tues	22 46 48	15 Mar (75)	4 Wed	9999 4219	171 0833	258 5271	4134
22 Mar (81)	5 Thur	4 58 57	4 Mar (63)	1 Sun	9875 1447	17 3274	227 7028	4135
22 Mar (81)	6 Fri .	11 11 6	22 Feb (53)	6 Fri	89 4995	901 8631	199 6173	4136
22 Mar (81)	0 Sat	17 23 5	13 Mar (72)	5 Thur	124 1819	837 8565	250 4278	4137
21 Mar (81)	1 Sun .	23 35 24	1 Mar (61)	2 Mon	9099 9048	685 1006	219 6046	4138
22 Mar (81)	3 Tues	5 47 33	20 Mar (79)	1 Sun	34 5871	621 0940	271 4150	4139
22 Mar (81)	4 Wed	11 59 42	9 Mar (68)	5 Thur	9910 3100	468 3381	239 5919	4140
22 Mar (81)	5 Thur	18 11 50	26 Feb (57)	2 Mon	9786 0329	315 5822	209 7686	4141
22 Mar (82)	0 Sat	0 23 59	16 Mar (76)	1 Sun	9820 7152	251 5756	261 0791	4142
22 Mar (81)	1 Sun	6 36 8	6 Mar (65)	6 Fri .	35 0700	145 1113	232 9936	4143
22 Mar (81)	2 Mon	12 48 17	23 Feb (54)	3 Tues	9910 7929	982 3553	202 1704	4144
22 Mar (81)	3 Tues	19 0 26	14 Mar (73)	2 Mon	9945 4753	918 3478	253 4808	4145
22 Mar (82)	5 Thur	1 12 35	3 Mar (63)	0 Sat .	159 5301	801 8845	225 3953	4146
22 Mar (81)	6 Fri .	7 24 44	22 Mar (81)	6 Fri	194 5125	737 8780	276 7058	4147

TABLE

CONCURRENT YEAR								Intercalated (adhika) and suppressed (kshaya) true lunar months
						JOVIAN SAMVATSARA.		
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4148	969	1104	453	221 22	1046 47	20 Vyaya	22 Sarvadhārin	
4149	970	1105	454	222 23	1047-48	21 Sarvajit	23 Virōdhin	5 Śrāvana
4150	971	1106	455	223 24	*1048 49	22 Sarvadhārin	24 Vikṛita	
4151	972	1107	456	224 25	1049 50	23 Virōdhin	25 Khara	
4152	973	1108	457	225 26	1050 51	24 Vikṛita	26 Nandana	3 Jyēshṭha
4153	974	1109	458	226 27	1051-52	25 Khara	27 Vijaya	..
4154	975	1110	459	227-28	*1052 53	26 Nandana	28 Jaya	..
4155	976	1111	460	228 29	1053-54	27 Vijaya	29 Manmatha	2 Vaiśākha
4156	977	1112	461	229 30	1054 55	28 Jaya	30 Durmukha	..
4157	978	1113	462	230 31	1055-56	29 Manmatha	31 Hēmalamba	6 Bhādrapada
4158	979	1114	463	231-32	*1056 57	30 Durmukha	32 Vilamba	
4159	980	1115	404	232-33	1057-58	31 Hēmalamba	33 Vikārin	..
4160	981	1116	465	233 34	1058 59	32 Vilamba	34 Śārvarin	4 Āshādha
4161	982	1117	466	234-35	1059-60	33 Vikārin	35 Plava	
4162	983	1118	467	235 36	*1060 61	34 Śārvarin	36 Śubhakṛit	..
4163	984	1119	468	236 37	1061-62	35 Plava	37 Śōbhana	3 Jyēshṭha
4164	985	1120	469	237-38	1062 63	36 Śubhakṛit	38 Krōdhin	..
4165	986	1121	470	238 39	1003 64	37 Śōbhana	39 Visvāvasu	7 Āśvina
4166	987	1122	471	239 40	*1064 65	38 Krōdhin	40 Parābhava	..
4167	988	1123	472	240 41	1065-66	39 Viśvāvasu	41 Plavanga	..
4168	989	1124	473	241 42	1066 67	40 Parābhava	42 Kīlaka	5 Śrāvaṇa
4169	990	1125	474	242 43	1067-68	41 Plavaṅga	43 Saumya	..
4170	991	1126	475	243 44	*1068 69	42 Kīlaka	44 Sādhāraṇa	
4171	992	1127	476	244 45	1069 70	43 Saumya	45 Virōdhakṛit	3 Jyēshṭha
4172	993	1128	477	245 46	1070 71	44 Sādhārana	46 Paridhāvin	

LXXXII—*Contd*

COMMENCEMENT OF THE								Kali
SOLAR YEAR.			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					
Day and month A. D	Week-day	Time of true Mēsha saṁkrānti	Day and month, A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
22 Mar (81)	0 Sat .	13 36 53	11 Mar (70)	3 Tues	70 2354	585 1221	245 8826	4148
22 Mar (81)	1 Sun .	19 49 2	28 Feb (59)	0 Sat	9945 9581	432 3601	215 0594	4149
22 Mar (82)	3 Tues	2 1 11	18 Mar (78)	6 Fri	9980 6406	368 3596	266 3697	4150
22 Mar (81)	4 Wed .	8 13 20	7 Mar (66)	3 Tues .	9856 3634	215 6036	235 5466	4151
22 Mar (81)	5 Thur	14 25 29	25 Feb (56)	1 Sun	70 7183	99 1393	207 7536	4152
22 Mar (81)	6 Fri .	20 37 38	16 Mar (75)	0 Sat	105 4006	35 1328	258 7716	4153
22 Mar (82)	1 Sun .	2 49 47	4 Mar (64)	4 Wed	9981 1235	882 3769	227 9483	4154
22 Mar (81)	2 Mon .	0 1 56	22 Feb (53)	2 Mon	195 4783	767 9126	199 8629	4155
22 Mar (81)	3 Tues .	15 14 5	13 Mar (72)	1 Sun .	230 1606	701 9061	251 1734	4156
22 Mar (81)	4 Wed .	21 26 14	2 Mar (61)	5 Thur	105 8835	549 1501	220 3501	4157
22 Mar (82)	6 Fri .	3 38 23	20 Mar (80)	4 Wed	140 5659	485 1435	271-6605	4158
22 Mar (81)	0 Sat .	9 50 32	9 Mar (68)	1 Sun .	16 2888	333 3876	240 8375	4159
22 Mar (81)	1 Sun	16 2 41	26 Feb (57)	5 Thur	9892 0116	179 6317	210 0142	4160
22 Mar (81)	2 Mon	22 14 50	17 Mar (76)	4 Wed	9926 6040	115 6452	261 3246	4161
22 Mar (82)	4 Wed	4 26 59	6 Mar (66)	2 Mon .	141 0488	999 1608	233 2391	4162
22 Mar (81)	5 Thur	10 39 8	23 Feb (54)	6 Fri.	16 7716	856 4049	202 4159	4163
22 Mar (81)	6 Fri .	16 51 17	14 Mar (73)	5 Thur	51 4540	782 3983	253 7264	4164
22 Mar (81)	0 Sat	23 3 26	4 Mar (63)	3 Tues	265 8089	665 9341	225 6409	4165
22 Mar (82)	2 Mon	5 15 35	21 Mar. (81)	1 Sun .	9961 8593	565 6363	274 2135	4166
22 Mar (81)	3 Tues	11 27 44	10 Mar (69)	5 Thur	9837 5821	412 8799	243 3903	4167
22 Mar (81)	4 Wed	17 39 53	28 Feb (59)	3 Tues.	51 9369	296 4157	215 3050	4168
22 Mar (81)	5 Thur	23 52 2	18 Mar (77)	1 Sun. .	9747 9874	196 1174	263 8775	4169
22 Mar. (82)	0 Sat .	6 4 11	7 Mar (67)	6 Fri. .	9962 3421	79 6532	235 7921	4170
22 Mar (81)	1 Sun .	12 16 20	25 Feb (56)	4 Wed. .	176 6970	963 1888	207 7067	4171
22 Mar (81)	2 Mon	18 28 29	16 Mar (75)	3 Tues .	211 3794	899 1823	259 0172	4172

TABLE

CONCURRENT YEAR								Intercalated (adhika) and suppressed (kshaya) true lunar months
Kali	Śaka	Chaitrādi Vikrama	Meshadi solar year in Bengal	Kollam	A D	Jovian Samvatsara Southern system	Jovian Samvatsara Northern system	
1	2	3	3a	4	5	6	7	8
4173	994	1129	478	246 47	1071 72	45 Virōdhakṛit	47 Pramādin	{ 8 Kārttika . / 9 Mārgaś (Ksh) }
4174	995	1130	479	247-48	*1072 73	46 Paridhāvin	48 Ānanda	2 Vaiśākha
4175	996	1131	480	248 49	1073 74	47 Pramādin	49 Rākshasa	
4176	997	1132	481	249 50	1074 75	48 Ānanda	50 Anala†	6 Bhādrapada
4177	998	1133	482	250 51	1075-76	49 Rākshasa	52 Kālayukta	...
4178	999	1134	483	251 52	*1076-77	50 Anala	53 Siddhārthin	.
4179	1000	1135	484	252 53	1077-78	51 Pingala	54 Raudra	4 Āshāḍha
4180	1001	1136	485	253 54	1078 79	52 Kālayukta	55 Durmati	.
4181	1002	1137	486	254-55	1079 80	53 Siddhārthin	56 Dundubhi	.
4182	1003	1138	487	255 56	*1080 81	54 Raudra	57 Rudhirōdgārin	3 Jyēshtha
4183	1004	1139	488	256 57	1081-82	55 Durmati	58 Raktāksha	.
4184	1005	1140	489	257 58	1082 83	56 Dundubhi	59 Krōdhana	7 Āśvina
4185	1006	1141	490	258 59	1083 84	57 Rudhirōdgārin	60 Kshaya	
4186	1007	1142	491	259 60	*1084 85	58 Raktāksha	1 Prabhava	.
4187	1008	1143	492	260 61	1085 86	59 Krōdhana	2 Vibhava	5 Srāvaṇa
4188	1009	1144	493	261-62	1086 87	60 Kshaya	3 Śukla	...
4189	1010	1145	494	262 63	1087 88	1 Prabhava	4 Pramōda	.
4190	1011	1146	495	263-64	*1088 89	2 Vibhava	5 Prajāpati	3 Jyēshtha
4191	1012	1147	496	264 65	1089-90	3 Śukla	6 Angiras	
4192	1013	1148	497	265 66	1090 91	4 Pramōda	7 Śrīmukha	{ 8 Kārttika / 10 Pausha (Ksh) }
4193	1014	1149	498	266 67	1091 92	5 Prajāpati	8 Bhāva	1 Chaitra
4194	1015	1150	499	267-68	*1092-93	6 Angiras	9 Yuvan	..
4195	1016	1151	500	268 69	1093 94	7 Śrīmukha	10 Dhātṛi	6 Bhādrapada
4196	1017	1152	501	269 70	1094-95	8 Bhāva	11 Īśvara	...
4197	1018	1153	502	270 71	1095 96	9 Yuvan	12 Bahudhānya	...

† 51 Pingala was suppressed in the north.

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COMMENCEMENT OF THE								
SOLAR YEAR.			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					Kali
Day and month A. D.	Week-day.	Time of true Mêsha saṁkrānti.	Day and month A. D	Week-day	*a*	*b*	*c*	
13	14	17	19	20	23	24	25	1
		H. M S						
23 Mar (82)	4 Wed.	0 40 38	5 Mar (64)	0 Sat .	87 1023	746 4264	228 1939	4173
22 Mar (82)	5 Thur	6 52 47	22 Feb (53)	4 Wed	9962 8251	593 6705	197 3706	4174
22 Mar (81)	6 Fri. .	13 4 56	12 Mar (71)	3 Tues	9997 5074	530 6639	248 6811	4175
22 Mar. (81)	0 Sat. .	10 17 5	1 Mar (60)	0 Sat. .	9873 2303	376 0079	217 8580	4176
23 Mar. (82)	2 Mon.	1 29 14	20 Mar (79)	6 Fri .	9907 9126	312 9015	269 1683	4177
22 Mar. (82)	3 Tues	7 41 23	8 Mar (68)	3 Tues	9783 6355	160 1454	238 3451	4178
22 Mar (81)	4 Wed	13 53 32	26 Feb (57)	1 Sun .	9997 9904	43 6812	210 2597	4179
22 Mar (81)	5 Thur	20 5 41	17 Mar (76)	0 Sat .	32 6728	979 6747	261 5702	4180
23 Mar. (82)	0 Sat	2 17 50	7 Mar (66)	5 Thur.	247 0275	863 2103	233 4847	4181
22 Mar (82)	1 Sun .	8 29 59	24 Feb (55)	2 Mon	122 7504	710 4544	202 6614	4182
22 Mar (81)	2 Mon	14 42 8	14 Mar. (73)	1 Sun .	157 4328	646 4478	253 9719	4183
22 Mar. (81)	3 Tues	20 54 17	3 Mar (62)	5 Thur	33 1557	493 6919	223 1487	4184
23 Mar. (82)	5 Thur	3 6 26	22 Mar (81)	4 Wed	67 8380	429 6854	274 4591	4185
22 Mar (82)	6 Fri	9 18 35	10 Mar (70)	1 Sun	9943 5609	276 9294	245 6358	4186
22 Mar (81)	0 Sat. .	15 30 43	27 Feb (58)	6 Thur	9819 2837	124 1735	212 8127	4187
22 Mar (81)	1 Sun	21 42 52	18 Mar (77)	4 Wed	9853 9661	60 1669	264 1231	4188
23 Mar (82)	3 Tues	3 55 1	8 Mar (67)	2 Mon	68 3209	943 8027	236 0377	4189
22 Mar (82)	4 Wed	10 7 10	26 Feb. (57)	0 Sat .	282 6758	827 2383	207·9522	4190
22 Mar (81)	5 Thur	16 19 19	16 Mar (75)	6 Fri .	317 3582	763 2318	259 2627	4191
22 Mar (81)	6 Fri .	22 31 28	5 Mar (64)	3 Tues	193 0310	610 4759	228 4395	4192
23 Mar. (82)	1 Sun .	4 43 37	22 Feb. (53)	0 Sat .	68 8039	457 7200	197 6162	4193
22 Mar (82)	2 Mon. .	10 55 46	12 Mar (72)	6 Fri. .	103 4862	393 7134	248 9266	4194
22 Mar. (81)	3 Tues	17 7 55	1 Mar (60)	3 Tues	9979 2090	240 9577	218 1035	4195
22 Mar (81)	4 Wed	23 20 4	20 Mar (79)	2 Mon .	13 8914	176·9509	269 4139	4196
23 Mar (82)	6 Fri .	5 32 13	9 Mar. (68)	6 Fri .	9889 6143	24 1949	238 5907	4197

						CONCURRENT YEAR.			Intercalated (adhika) and suppressed (kshaya) true lunar months
							JOVIAN SAMVATSARA		
Kali	Saka	Chaitrādi Vikrama	Meshādi solar year in Bengal	Kollam.	A. D		Southern system	Northern system	
1	2	3	3a	4	5		6	7	8
4198	1019	1154	503	271-72	*1096 97		10 Dhātṛi .	13 Pramāthin	4 Āshādha
4199	1020	1155	504	272-73	1097-98		11 Īśvara .	14 Vikrama	
4200	1021	1156	505	273 74	1098 99		12 Bahudhānya .	15 Vrisha .	.
4201	1022	1157	506	274-75	1099 1100		13 Pramāthin .	16 Chitrabhānu .	3 Jyēshṭha
4202	1023	1158	507	275 76	*1100 01		14 Vikrama .	17 Subhānu	.
4203	1024	1159	508	276 77	1101-02		15 Vrisha .	18 Tārana	7 Āśvina
4204	1025	1160	509	277-78	1102-03		16 Chitrabnānu .	19 Pārthiva	
4205	1026	1161	510	278-79	1103 04		17 Subhānu	20 Vyaya .	
4206	1027	1162	511	279 80	*1104 05		18 Tārana .	21 Sarvajit	4 Āshādha
4207	1028	1163	512	280 81	1105 06		19 Pārthiva	22 Sarvadhārin	
4208	1029	1164	513	281 82	1106 07		20 Vyaya .	23 Virōdhin	.
4209	1030	1165	514	282-83	1107-08		21 Sarvajit .	24 Vikṛita .	3 Jyēshṭha
4210	1031	1166	515	283 84	*1108 09		22 Sarvadhārin	25 Khara .	8 Kārttika
4211	1032	1167	516	284 85	1109-10		23 Virōdhin .	26 Nandana	10 Pauṣha (ksh)
4212	1033	1168	517	285 86	1110-11		24 Vikṛita .	27 Vijaya .	12 Phālguna
4213	1034	1169	518	286 87	1111-12		25 Khara .	28 Jaya .	.
4214	1035	1170	519	287 88	*1112-13		26 Nandana	29 Manmatha .	5 Śrāvana
4215	1036	1171	520	288-89	1113-14		27 Vijaya .	30 Durmukha .	
4216	1037	1172	521	289 90	1114 15		28 Jaya .	31 Hēmalamba	
4217	1038	1173	522	290 91	1115-16		29 Manmatha	32 Vilamba .	4 Āshādha
4218	1039	1174	523	291-92	*1116 17		30 Durmukha .	33 Vikārin	.
4219	1040	1175	524	292-93	1117-18		31 Hēmalamba .	34 Sārvarin	
4220	1041	1176	525	293 94	1118 19		32 Vilamba .	35 Plava .	2 Vaiśākha
4221	1042	1177	526	294 95	1119-20		33 Vikārin .	36 Śubhakṛit	
4222	1043	1178	527	295 96	*1120 21		34 Sārvarin .	37 Śōbhana .	6 Bhādrapada

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COMMENCEMENT OF THE								Kali
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)					
Day and month A D	Week-day	Time of true Mesha san kranti	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
22 Mar (82)	0 Sat	11 41 22	27 Feb (58)	4 Wed	103 9691	907 7307	210 5052	4198
22 Mar (81)	1 Sun	17 56 31	17 Mar (76)	3 Tues	138 6515	843 7242	261 8157	4199
23 Mar (82)	3 Tues	0 8 40	6 Mar (65)	0 Sat	14 3744	690 9683	230 9925	4200
23 Mar (82)	4 Wed	6 20 49	24 Feb (55)	5 Thur	228 7291	574 5038	202 8848	4201
22 Mar (82)	5 Thur	12 32 58	13 Mar (73)	3 Tues	9924 7795	474 2057	251 4575	4202
22 Mar (81)	6 Fri	18 45 7	2 Mar (61)	0 Sat	9800 5024	321 4497	20 6342	4203
23 Mar (82)	1 Sun	0 57 16	21 Mar (80)	6 Fri	9835 1847	237 4432	271 9446	4204
23 Mar (82)	2 Mon	7 9 25	11 Mar (70)	4 Wed	49 5396	140 9788	243 8592	4205
22 Mar (82)	3 Tues	13 21 34	28 Feb (59)	1 Sun	9925 2624	988 2229	213 0361	4206
22 Mar (81)	4 Wed	19 33 43	18 Mar (77)	0 Sat	9959 9448	924 2154	264 3464	4207
23 Mar (82)	6 Fri	1 45 52	8 Mar (67)	5 Thur	174 2996	807 7521	236 2010	4208
23 Mar (82)	0 Sat	7 58 1	25 Feb (56)	2 Mon	50 0225	654 9962	205 4387	4209
22 Mar (82)	1 Sun	14 10 10	15 Mar (75)	1 Sun	84 7018	590 9896	256 7493	4210
22 Mar (81)	2 Mon	20 22 19	4 Mar (63)	5 Thur	9960 4277	438 2337	225 9250	4211
23 Mar (82)	4 Wed	2 34 28	23 Mar (82)	4 Wed	9995 1101	374 2271	277 2354	4212
23 Mar (82)	5 Thur	8 46 37	12 Mar (71)	1 Sun	9870 8330	221 4712	246 4122	4213
22 Mar (82)	6 Fri	14 58 16	1 Mar (61)	6 Fri	85 1877	105 0069	218 3269	4214
22 Mar (81)	0 Sat	21 10 55	20 Mar (79)	5 Thur	119 8701	41 0004	269 6373	4215
23 Mar (82)	2 Mon	3 23 4	0 Mar (68)	2 Mon	9995 5930	888 3444	238 8140	4216
23 Mar (82)	3 Tues	9 35 13	27 Feb (58)	0 Sat	209 9478	771 7891	210 7286	4217
22 Mar (82)	4 Wed	15 47 22	17 Mar (77)	6 Fri	244 6302	707 7736	262 0391	4218
22 Mar (81)	5 Thur	21 59 31	6 Mar (65)	3 Tues	120 3530	555 0176	231 2158	4219
23 Mar (82)	0 Sat	4 11 40	23 Feb (54)	0 Sat	9996 0759	402 2617	200 3925	4220
23 Mar (82)	1 Sun	10 23 49	14 Mar (73)	6 Fri	30 7582	338 2552	251 7030	4221
22 Mar (82)	2 Mon	16 35 58	2 Mar (62)	3 Tues	9906 4811	185 4093	220 8798	4222

TABLE

CONCURRENT YEAR								Intercalated (adhika) and suppressed (kshaya) true lunar months.
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam.	A D	Jovian Samvatsara.		
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8
4223	1044	1179	528	296-97	1121-22	35 Plava	38 Krōdhin	
4224	1045	1180	529	297-98	1122-23	36 Śubhakṛt	39 Viśvāvasu	
4225	1046	1181	530	298-99	1123 24	37 Śōbhana	40 Parābhava	4 Āshādha
4226	1047	1182	531	299-300	*1124-25	38 Krōdhin	41 Plavanga	
4227	1048	1183	532	300 01	1125 26	39 Viśvāvasu	42 Kīlaka	
4228	1049	1184	533	301-02	11 6-27	40 Parābhava	43 Saumya	
4229	1050	1185	534	302-03	1127 28	41 Plavanga	44 Sādhāraṇa	3 Jyēshṭha
4230	1051	1186	535	303 04	*1128 29	42 Kīlaka	45 Virōdhakṛt	12 Phālguna†
4231	1052	1187	536	304-05	1129 30	43 Saumya	46 Paridhāvin	
4232	1053	1188	537	305 06	1130 31	44 Sādhāraṇa	47 Pramādin	
4233	1054	1189	538	306 07	1131-32	45 Virōdhakṛt	48 Ānanda	
4234	1055	1190	539	307-08	*1132 33	46 Paridhāvin	49 Rākshasa	5 Śrāvana
4235	1056	1191	540	308 09	1133 34	47 Pramādin	50 Anala	
4236	1057	1192	541	309 10	1134-35	48 Ānanda	51 Pingala	
4237	1058	1193	542	310 11	1135 36	49 Rākshasa	52 Kālayukta	4 Āshādha
4238	1059	1194	543	311-12	*1136-37	50 Anala	53 Siddhārthin	
4239	1060	1195	544	312-13	1137-38	51 Pingala	54 Raudra	
4240	1061	1196	545	313 14	1138-39	52 Kālayukta	55 Durmati	2 Vaiśākha
4241	1062	1197	546	314-15	1139 40	53 Siddhārthin	56 Dundubhi	
4242	1063	1198	547	315 16	*1140 41	54 Raudra	57 Rudhirōdgārin	6 Bhādrapada
4243	1064	1199	548	316-17	1141 42	55 Durmati	58 Raktāksha	
4244	1065	1200	549	317-18	1142 48	56 Dundubhi	59 Krōdhana	
4245	1066	1201	550	318 19	1143 44	57 Rudhirōdgārin	60 Kshaya	4 Āshādha
4246	1067	1202	551	819 20	*1144 45	58 Raktāksha	1 Prabhava	
4247	1068	1203	552	320-21	1145 46	59 Krōdhana	2 Vibhava	3 Jyēshṭha

† See "Remarks" on page preceding the Table

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COMMENCEMENT OF THE								Kali.
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)					
Day and month A D.	Week-day	Time of true Mēsha-sam-krantı.	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S.						
22 Mar (81)	3 Tues	22 48 7	21 Mar (80)	2 Mon	9941 1635	121 4928	272 1902	4223
23 Mar (82)	5 Thur	5 0 16	11 Mar (70)	0 Sat	155 5183	5 0284	244 1047	4224
23 Mar (82)	6 Fri	11 12 25	28 Feb (59)	4 Wed	31 2411	852 2724	213·2826	4225
22 Mar (82)	0 Sat	17 24 34	18 Mar (78)	3 Tues	65 9236	788 2659	264 5920	4226
22 Mar (81)	1 Sun	23 36 43	8 Mar (67)	1 Sun	280 2784	671 8016	236 5066	4227
23 Mar (82)	3 Tues	5 48 52	25 Feb (56)	5 Thur	156 0012	519 0457	205 6833	4228
23 Mar (82)	4 Wed	12 1 1	15 Mar. (74)	3 Tues	9852 0516	418·7475	254·2560	4229
22 Mar (82)	5 Thur	18 13 10	3 Mar (63)	0 Sat	9727 7745	265 9915	223 4328	4230
23 Mar (82)	0 Sat	0 25 19	22 Mar (81)	6 Fri	9762 4568	201 9851	274 7432	4231
23 Mar (82)	1 Sun	6 37 27	12 Mar (71)	4 Wed	9976 8117	85 5207	246 6577	4232
23 Mar (82)	2 Mon	12 49 36	2 Mar (61)	2 Mon	191 1665	969 0564	218 5724	4233
22 Mar (82)	3 Tues	19 1 45	20 Mar (80)	1 Sun	225 8489	905 0499	269 8828	4234
23 Mar (82)	5 Thur	1 13 54	9 Mar (68)	5 Thur	101 5717	752 2939	239 0596	4235
23 Mar (82)	6 Fri	7 26 3	26 Feb (57)	2 Mon.	9977 2946	599 5380	208 2363	4236
23 Mar (82)	0 Sat	13 38 12	17 Mar (76)	1 Sun.	11 9770	535 5314	259 5468	4237
22 Mar (82)	1 Sun	19 50 21	5 Mar (65)	5 Thur	9887 6999	382 7755	228 7236	4238
23 Mar (82)	2 Tues	2 2 30	22 Feb (53)	2 Mon	9763 4226	230 1095	197 9004	4239
23 Mar (82)	4 Wed	8 14 39	13 Mar (72)	1 Sun.	9798 1050	166 0130	249 2108	4240
23 Mar (82)	5 Thur.	14 26 48	3 Mar. (62)	6 Fri	12 4599	49 5488	221 1253	4241
22 Mar (82)	6 Fri	20 38 57	21 Mar (81)	5 Thur	47 1422	985 5422	272 4358	4242
23 Mar (82)	1 Sun	2 51 6	11 Mar (70)	3 Tues	261 4971	869 0779	244·3503	4243
23 Mar (82)	2 Mon	9 3 15	28 Feb (59)	0 Sat	137·2199	716 3219	214 5272	4244
23 Mar (82)	3 Tues	15 15 24	19 Mar (78)	6 Fri	171·9024	652 3154	264 8375	5245
22 Mar (82)	4 Wed	21 27 33	7 Mar (67)	3 Tues	47 6251	499 5595	234 0143	4246
23 Mar (82)	6 Fri	3 39 42	24 Feb (55)	0 Sat	9923 3480	346 9035	203 1911	4247

TABLE

						CONCURRENT YEAR			
Kali	Śaka	Chaitrādi Vikrama,	Mēshādi solar year in Bengal	Kollam	A. D.	**Jovian Samvatsara** Southern system.	Northern system	Intercalated (adhika) and suppressed (Kshaya) true lunar months.
1	2	3	3a	4	5	6	7	8
4248	1069	1204	553	321-22	1146 47	60 Kshaya	3 Śukla	
4249	1070	1205	554	322-23	1147-48	1 Prabhava	4 Pramōda	{ 8 Kārttika 9 *Mārgaś (ksh)* 12 Phālguna }
4250	1071	1206	555	323-24	*1148 49	2 Vibhava	5 Prajāpati	..
4251	1072	1207	556	324-25	1149 50	3 Śukla	6 Angiras	.
4252	1073	1208	557	325-26	1150 51	4 Pramōda	7 Śrīmukha	5 Śrāvaṇa
4253	1074	1209	558	326-27	1151-52	5 Prajāpati	8 Bhāva	.
4254	1075	1210	559	327-28	*1152-53	6 Angiras	9 Yuvan	.
4255	1076	1211	560	328 29	1153-54	7 Śrīmukha	10 Dhātṛ	4 Āshādha
4256	1077	1212	561	329 30	1154-55	8 Bhāva	11 Iśvara	...
4257	1078	1213	562	330 31	1155 56	9 Yuvan	12 Bahudhānya	
4258	1079	1214	563	331-32	*1156-57	10 Dhātṛi	13 Pramāthin	2 Vaiśākha
4259	1080	1215	564	332-33	1157-58	11 Iśvara	14 Vikrama	.
4260	1081	1216	565	333 34	1158 59	12 Bahudhānya	15 Vṛisha	6 Bhādrapada
4261	1082	1217	566	334-35	1159 60	13 Pramāthin	16 Chitrabhānu†	
4262	1083	1218	567	335-36	*1160 61	14 Vikrama	18 *Tārana*	.
4263	1084	1219	568	336-37	1161-62	15 Vṛisha	19 *Pārthiva*	4 Āshādha
4264	1085	1220	569	337-38	1162-63	16 Chítrabhānu	20 *Vyaya*	.
4265	1086	1221	570	338-39	1163 64	17 Subhānu	21 *Sarvajit*	.
4266	1087	1222	571	339-40	*1164-65	18 Tārana	22 *Sarvadhārin*	3 Jyēshṭha
4267	1088	1223	572	340 41	1165-66	19 Pārthi...	23 Virōdhin	
4268	1089	1224	573	341-42	1166 67	20 Vyaya	24 Vikṛita	{ 7 Āśvina 10 *Pausha (ksh)* 12 Phālguna }
4269	1090	1225	574	342-43	1167-68	21 Sarvajit	25 Khara	
4270	1091	1226	575	343 44	*1168 69	22 Sarvadhārin	26 Nandana	.
4271	1092	1227	576	344 45	1169-70	23 Virōdhin	27 Vijaya	5 Śrāvaṇa
4272	1093	1228	577	345 46	1170 71	24 Vikṛita	28 Jaya	....

† 17 Subhānu was suppressed in the north.

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COMMENCEMENT OF THE									Kali
SOLAR YEAR			LUNI SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).						
Day and month A D	Week-day	Time of true Mēsha sath krānti	Day and month A D	Week-day.	a	b	c		
13	14	17	19	20	23	24	25		1
		H M S							
23 Mar (82)	0 Sat	9 51 51	15 Mar (74)	6 Fri	9958 0304	282 7970	254 5016		4248
23 Mar (82)	1 Sun	16 4 0	4 Mar (63)	3 Tues	9833 7532	120 0410	223 6783		4249
22 Mar (82)	2 Mon	22 16 9	22 Mar (82)	2 Mon	9868 4356	66 0346	274 9887		4250
23 Mar (82)	4 Wed	4 28 18	12 Mar (71)	0 Sat	82 7905	949 5702	246 9033		4251
23 Mar (82)	5 Thur	10 40 27	2 Mar (61)	5 Thur	297 1453	833 1059	218 6180		4252
23 Mar (82)	6 Fri	16 52 36	21 Mar (80)	4 Wed	331 8276	769 0994	270 1283		4253
22 Mar (82)	0 Sat	23 4 45	9 Mar (69)	1 Sun .	207 5505	616 3435	239 3051		4254
23 Mar (82)	2 Mon	5 16 54	26 Feb (57)	5 Thur	83 2734	463 5875	208 4819		4255
23 Mar (82)	3 Tues	11 29 3	10 Mar (75)	3 Tues	9779 3237	363 2894	257 0546		4256
23 Mar (82)	4 Wed	17 41 12	6 Mar (65)	1 Sun	9993 6786	246 8250	228 9601		4257
22 Mar (82)	5 Thur	23 53 21	23 Feb (54)	5 Thur	9869 4024	94 0691	198 1458		4258
23 Mar (82)	0 Sat .	6 5 30	13 Mar (72)	4 Wed	9904 0838	30 0625	249 4563		4259
23 Mar (82)	1 Sun	12 17 39	3 Mar (62)	2 Mon	118 4366	913 5083	221 3709		4260
23 Mar (82)	2 Mon	18 29 48	22 Mar (81)	1 Sun	153 1210	849 5918	272 6813		4261
23 Mar (63)	4 Wed	0 41 57	10 Mar (70)	5 Thur	28 8439	696 8358	241 8581		4262
23 Mar (82)	5 Thur	6 54 6	27 Feb (58)	2 Mon .	9904 5667	544 0799	211 0349		4263
23 Mar (82)	6 Fri	13 6 15	18 Mar (77)	1 Sun	9939 2491	480 0733	262 3454		4264
23 Mar (82)	0 Sat	19 18 24	7 Mar (66)	5 Thur	9814 9719	327 3173	231 5221		4265
23 Mar (83)	2 Mon	1 30 33	25 Feb (56)	3 Tues	29 3268	210 8530	203 4366		4266
23 Mar (82)	3 Tues	7 42 42	15 Mar (74)	2 Mon	64 0091	146 8465	255 7471		4267
23 Mar (82)	4 Wed	13 54 51	4 Mar (63)	6 Fri	9939 7320	994 0906	223 6239		4268
23 Mar (82)	5 Thur	20 7 0	23 Mar (82)	5 Thur	9974 4144	930 0840	275 2343		4269
23 Mar (83)	0 Sat	2 19 9	12 Mar (72)	3 Tues	188 7692	813 6198	247 1488		4270
23 Mar (82)	1 Sun	8 31 18	1 Mar (60)	0 Sat	64 4920	660 8033	216 3257		4271
23 Mar (82)	2 Mon	14 43 27	20 Mar (79)	6 Fri	99 1744	596 8573	267 6361		4272

TABLE

				CONCURRENT YEAR				Intercalated (adhika) and suppressed (kshaya) true lunar months
						JOVIAN SAMVATSARA		
Kali	Śaka	Chaitrādi Vikrama	Meshādi solar year in Bengal	Kollam	A D	Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8
4273	1094	1229	578	346 47	1171 72	25 Khara	29 Manmatha	.
4274	1095	1230	579	347 48	*1172-73	26 Nandana	30 Durmukha	4 Āshādha
4275	1096	1231	580	348 49	1173 74	27 Vijaya	31 Hēmalamba	.
4276	1097	1232	581	349 50	1174 75	28 Jaya	32 Vilamba	.
4277	1098	1233	582	350 51	1175 76	29 Manmatha	33 Vikārin	2 Vaiśākha
4278	1099	1234	583	351 52	*1176-77	30 Durmukha	34 Śārvarin	.
4279	1100	1235	584	352 53	1177-78	31 Hēmalamba	35 Plava	6 Bhādrapada
4280	1101	1236	585	353 54	1178 79	32 Vilamba	36 Śubhakṛit	.
4281	1102	1237	586	354 55	1179 80	33 Vikārin	37 Śōbhana	. .
4282	1103	1238	587	355 56	*1180 81	34 Śārvarin	38 Krōdhin	4 Āshādha
4283	1104	1239	588	356 57	1181 82	35 Plava	39 Visvāvasu	.
4284	1105	1240	589	357 58	1182 83	36 Śubhakṛit	40 Parābhava	.
4285	1106	1241	590	358-59	1183 84	37 Śōbhana	41 Plavaṅga	2 Vaiśākha
4286	1107	1242	591	359 60	*1184-85	38 Krōdhin	42 Kīlaka	.
4237	1108	1243	592	360 61	1185 86	39 Viśvāvasu	43 Saumya	6 Bhādrapada
4288	1109	1244	593	361 62	1186 87	40 Parābhava	44 Sādhāraṇa	.
4289	1110	1245	594	362 63	1187 88	41 Plavaṅga	45 Virōdhakṛit	.
4290	1111	1246	595	363 64	*1188 89	42 Kīlaka	46 Paridhāvin	5 Śrāvana
4291	1112	1247	596	364 65	1189 90	33 Saumya	47 Pramādin	.
4292	1113	1248	597	365 66	1190 91	44 Sādhāraṇa	48 Ānanda	.
4293	1114	1249	598	306 67	1191-92	45 Virōdhakṛit	49 Rākshasa	3 Jyēshṭha
4294	1115	1250	599	367 68	*1192 93	46 Paridhāvin	50 Anala	.
4295	1116	1251	600	368-69	1193 94	47 Pramādin	51 Piṅgala	.
4296	1117	1252	601	369 70	1194 95	48 Ānanda	52 Kālayukta	2 Vaiśākha
4297	1118	1253	602	370 71	1195 96	49 Rākshasa	53 Siddhārthin	. .

LXXXII—*Contd*

COMMENCEMENT OF THE									Kali
SOLAR YEAR			LUNI-SOLAR YEAR (MEAN SUNRISE OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)						
Day and month A D	Week-day	Time of true Mēsha sam-krāntı	Day and month A D	Week-day	a	b	c		
13	14	17	19	20	23	24	25		!
		H M S							
23 Mar (82)	3 Tues	20 55 36	9 Mar (68)	3 Tues	9974 8973	444 1013	236 8129		4273
23 Mar (83)	5 Thur	3 7 45	26 Feb (57)	0 Sat	9850 6201	291 3454	205 9896		4274
23 Mar (82)	6 Frı	9 19 54	16 Mar (75)	6 Frı .	9885 3025	227 3389	257 3001		4275
23 Mar (82)	0 Sat	15 32 3	6 Mar (65)	4 Wed	99 6574	110 8745	229 2147		4276
23 Mar (82)	1 Sun	21 44 11	23 Feb (54)	1 Sun.	9975 3801	958 1187	198 1914		4277
23 Mar. (83)	3 Tues	3 56 20	13 Mar (73)	0 Sat	10 0625	894 1120	249 7018		4278
23 Mar (82)	4 Wed	10 8 29	3 Mar (62)	5 Thur	224 4174	777 6478	221 6164		4279
23 Mar (82)	5 Thur	16 20 38	22 Mar (81)	4 Wed	259 0998	713 6413	272 9269		4280
23 Mar (82)	6 Frı	22 32 47	11 Mar (70)	1 Sun	134 8226	560 8853	242 1036		4281
23 Mar (83)	1 Sun	4 44 56	28 Feb (59)	5 Thur	10 5455	408 1294	211 2804		4282
23 Mar (82)	2 Mon	10 57 5	18 Mar (77)	4 Wed	45 2279	344 1228	262 5909		4283
23 Mar (82)	3 Tues	17 9 14	7 Mar (66)	1 Sun	9920 9507	191 3668	231 7677		4284
23 Mar (82)	4 Wed	23 21 23	24 Feb (55)	5 Thur	9796 6735	38 6109	200 9444		4285
23 Mar (83)	6 Frı	5 33 32	15 Mar (75)	5 Thur	169 9879	10 8960	254 9926		4286
23 Mar (82)	0 Sat	11 45 41	4 Mar (63)	2 Mon	45 7108	858 1401	224 1694		4287
23 Mar (82)	1 Sun	17 57 50	23 Mar (82)	1 Sun .	80 3931	794 1335	275 4799		4288
24 Mar (83)	3 Tues	0 9 59	13 Mar (72)	6 Frı	294 7480	677 6693	247 3944		4289
23 Mar (83)	4 Wed	6 22 8	1 Mar (61)	3 Tues	170 4708	524 9133	216 5712		4290
23 Mar (82)	5 Thur	12 34 17	19 Mar (78)	1 Sun .	9866 5213	424 6151	265 1438		4291
23 Mar (82)	6 Frı	18 46 26	8 Mar (67)	5 Thur	9742 2440	271 8592	234 3207		4292
24 Mar. (83)	1 Sun	0 58 35	26 Feb (57)	3 Tues	9966 5989	155 3949	206 2752		4293
23 Mar (83)	2 Mon	7 10 44	16 Mar (76)	2 Mon	9991 2813	91 3884	257 5456		4294
23 Mar (82)	3 Tues	13 22 53	6 Mar (65)	0 Sat	205 6364	974 9241	229 4602		4295
23 Mar (82)	4 Wed.	19 35 2	23 Feb (54)	4 Wed	81 3580	822 1741	198 6370		4296
24 Mar (83)	6 Frı	1 47 11	14 Mar (73)	3 Tues	116 0413	758 1608	240 9474		4297

						JOVIAN SAMVATSARA.		Intercalated (adhıka) and suppressed (kshaya) true lunar months.
Kalı	Śaka	Chaitrādı Vikrama	Mıshūdı solar year in Bengal	Kollam.	A D.	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8
4298	1119	1254	603	371-72	*1196 97	50 Anala . .	54 Raudra .	6 Bhādrapada
4299	1120	1255	604	372-73	1197-98	51 Pıṅgala .	55 Durmati .	. .
4300	1121	1256	605	373 74	1198-99	52 Kālayukta .	56 Dundubhı .	...
4301	1122	1257	606	374-75	1199 1200	53 Sıddhārthın .	57 Rudhırōdgārın	4 Āshādha .
4302	1123	1258	607	375 76	*1200 01	54 Raudra .	58 Raktāksha .	...

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COMMENCEMENT OF THE								Kali.
SOLAR YEAR			LUNI SOLAR YEAR (YEAR SUBSIST OF CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)					
Day and month A D	Week-day	Time of true Mēsha sankrānti.	Day and month A D	Week-day	a	b	c	
13	14	17	19	20	23	24	25	1
		H M S						
23 Mar (83)	0 Sat	7 59 20	2 Mar (62)	0 Sat	9091 7641	605 4056	219 1242	4298
23 Mar (82)	1 Sun .	14 11 29	21 Mar (80)	6 Fri .	26 4465	541 3991	270 4346	4299
23 Mar (82)	2 Mon	20 23 38	10 Mar (69)	3 Tues	9902 1694	388 0432	239 6115	4300
24 Mar (83)	4 Wed	2 35 47	27 Feb (58)	0 Sat .	9777 8923	235 8872	208 7660	4301
23 Mar (83)	5 Thur	8 47 56	17 Mar (77)	6 Fri. .	9812 5747	171 8807	260 0765	4302

TABLE LXXXIII A

DURATION AND COLLECTIVE DURATION OF TRUE SOLAR MONTHS, WITH INCREASE OF a, b, c AT EACH TRUE SANKRÁNTI

By the Brahma-Siddhānta

Calculated for the year K Y 4500, (expired), A D 899—900

a in 10,000 ths of circle, b and c in 1,000 ths, "sam"=solar sankránti

Luni-solar month (ending at the second of the two solar sankrántis connected with it)	At true solar sankránti	Collective duration in days, hours, etc , and collective increase of a, b, c from true Mēsha sankránti to each true sankránti						At true solar sankránti	Length of solar month preceding each true sankránti, and increase of a, b, c between each such sankránti					
		Day	Week day	H M S	a	b	c		Day	Week day	H M S	a	b	c
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Chaitra	Mīna-sam (of previous year) / Mēsha-sam	0	0	0 0 0	0	0	0	Mēsha-sam	0	0	0	0	0	0
2 Vaisākha	Vrishabha-sam	30	(2)	22 21 9	474 3381	122 5490	84 0833	Vrishabha sam	30	(2)	22 21 9	474 3381	122 5490	84 0835
3 Jyēshtha	Mithuna-sam	62	(6)	8 16 57	1111 7956	262 5752	170 6856	Mithuna sam	31	(3)	0 54 48	637 4575	110 0262	86 0023
4 Ashādha	Karka-sam	93	(2)	23 12 15	1820 1580	410 2049	257 2010	Karka sam	31	(3)	14 50 18	708 3624	147 6207	80 5754
5 Srāvaṇa	Simha-sam	125	(6)	10 42 48	2480 1360	552 6492	343 4152	Simha-sam	31	(3)	11 30 33	659 9780	142 4443	86 1842
6 Bhādrapada	Kanyā-sam	156	(2)	11 41 2	2991 4178	679 1575	428 4273	Kanyā sam	31	(3)	0 59 15	541 2818	126 5083	84 0921
7 Āśvina	Tulā sam	186	(4)	22 35 20	3304 2747	784 1003	511 8051	Tulā sam	30	(2)	10 54 27	312 8509	105 2428	83 3778
8 Kārttika	Vrischika sam	210	(6)	20 28 50	3433 4472	869 9574	593 6970	Vrischika sam	29	(1)	21 53 21	129 1725	85 5571	81 8028
9 Mārgaśira	Dhanus sam	246	(1)	8 0 47	3416 4900	939 8537	674 4092	Dhanus sam	29	(1)	11 31 57	9993 0131	69 8963	80 7113
10 Pausha	Makara sam	275	(2)	10 49 9	3351 2241	4 5725	754 7290	Makara sam	29	(1)	8 0 11	9934 7333	64 7189	80 3207
11 Māgha	Kumbha sam	305	(4)	2 49 9	3322 5044	73 2145	835 3166	Kumbha sam	29	(1)	10 42 11	9971 3103	68 6420	80 0167
12 Phālguna	Mīna-sam	334	(3)	22 4 25	3411 3580	154 7871	016 0387	Mīna sam	29	(1)	10 15 10	019 9930	91 5726	81 5921
1 Chaitra (of following year)	Mēsha-sam (of following year)	365	(1)	6 12 9	3688 2050	255 8315	1000 0	Mēsha sam (of following year)	30	(2)	9 7 11	273 6470	101 0107	93 0609

TABLE LXXXIII B

VALUE OF c AND OF "EQUATION c" AT THE SEVERAL TRUE SAMKRĀNTIS

Correct for K Y 4000, A. D 899-900

c *in 1,000ths of circle,* " *equation c* " *in 10,000ths*

Samkrānti		c	" Equation c "
Mēsha-sam	.	277 6064	0 9037
Vrishabha sam	.	362 2899	14 4355
Mithuna-sam		448 2921	41 1356
Karka-sam	.	534 8676	73 5542
Simha sam		621 0519	102 0578
Kanyā sam	.	706 0241	118 5381
Tulā sam	.	789 4020	118 9561
Vrśchila sam	.	871 2948	104 1144
Dhanus sam	.	952 0062	78 3666
Makara sam		32 3264	48 2336
Kumbha-sam	.	112 9432	21 0624
Mīna-sam.	.	194 5355	3 6494

TABLE LXXXIII C.

EXACT VALUE OF c AND OF "EQUATION c" AT THE MOMENT OF TRUE MĒSHA-SAMKRĀNTI AT BEGINNING OF EACH CENTURY K. Y

c *in 1,000ths of circle*   " *Equation c* " *in 10,000ths.*

K Y	A D	c	" Eqn c "
3700	599 600	277 6399	0 9347
3800	699 700	277 6287	0 9340
3900	799 800	277 6175	0 9333
4000	899 900	277 6064	0 9326
4100	999-1000	277 5952	0 9319
4200	1099 1100	277 5840	0 9312
4300	1199-1200	277 5728	0 9305

TABLES LXXXIV, LXXXV.

" Equation b " and " Equation c " in whole numbers by the Brahma-Siddhānta and Siddhānta-Śirōmani

Corresponding to Tables VI, VII, " Indian Calendar."

For close detail Tables LV, LVI, (*Vol XV above*) are to be used.

" Arg "=moon's (b) or sun's (c) mean anom in 1000ths of circle

TABLE LXXXIV
Lunar " equation b "

Arg	Eqn	Arg		Arg	Eqn	Arg
0	140	500		500	140	1000
10	149	490		510	131	990
20	158	480		520	122	980
30	166	470		530	114	970
40	174	460		540	105	960
50	183	450		550	97	950
60	191	440		560	88	940
70	199	430		570	80	930
80	207	420		580	73	920
90	214	410		590	65	910
100	222	400		600	58	900
110	229	390		610	51	890
120	235	380		620	44	880
130	241	370		630	38	870
140	247	360		640	32	860
150	253	350		650	27	850
160	258	340		660	22	840
170	262	330		670	17	830
180	266	320		680	13	820
190	270	310		690	10	810
200	273	300		700	7	800
210	275	290		710	4	790
220	277	280		720	2	780
230	279	270		730	1	770
240	279	260		740	0	760
250	280	250		750	0	750

TABLE LXXXV
Solar " equation c "

Arg	Eqn	Arg		Arg	Eqn	Arg
0	60	500		500	60	1000
10	56	490		510	64	990
20	53	480		520	68	980
30	49	470		530	72	970
40	46	460		540	75	960
50	42	450		550	79	950
60	38	440		560	82	940
70	34	430		570	86	930
80	31	420		580	89	920
90	28	410		590	93	910
100	25	400		600	96	900
110	22	390		610	99	890
120	19	380		620	102	880
130	16	370		630	104	870
140	14	360		640	107	860
150	12	350		650	109	850
160	9	340		660	111	840
170	7	330		670	113	830
180	6	320		680	115	820
190	4	310		690	117	810
200	3	300		700	118	800
210	2	290		710	119	790
220	1	280		720	120	780
230	0	270		730	120	770
240	0	260		740	121	760
250	0	250		750	121	750

AUXILIARY TABLE

Difference in Equation	9	8	7	6	5	4	3	2	1
	Add or subtract								
9	8	7	6	5	4 or 5	4	3	2	1
8	7	6	6	5	4	3	2	2	1
7	6	6	5	4	3 or 4	3	2	1	1
6	5	5	4	4	3	2	2	1	1
5	4 or 5	4	3 or 4	3	2 or 3	2	1 or 2	1	0 or 1
4	4	3	3	2	2	2	1	1	0
3	3	2	2	2	1 or 2	1	1	1	0
2	2	2	1	1	1	1	1	0	0
1	1	1	1	1	0 or 1	0	0	0	0

TABLE LXXXVI.

VALUE OF a, b, c AT BEGINNING OF CENTURIES OF THE KALIYUGA, BY THE BRAHMA-SIDDHANTA.

K Y Century.	Beginning in A D.	Week-day.	a	b	c
37	599	0	6028 1929	719ʼ2529	282 9906
38	699	6	4900 0921	308 0530	283 3962
39	799	6	3433 3593	860 5614	281 0640
40	899	6	2305 2584	449 3615	281 4695
41	999	6	1177 1576	38 1616	281 8751
42	1099	6	49 0567	626 9616	282 2807
43	1199	0	8920 9559	215 7617	282 6863

TABLE LXXXVII.

INCREASE OF a, b, c FOR YEARS OF KALIYUGA CENTURY.

* = year of 366 days.

Year.	Week-day	a	b	c	Year	Week-day	a	b	c
0	0	0	0	0	30	3	729 2961	683 8984	0 6759
1	1	3600 6747	246 4522	999 2925	31	4	4329 9708	930 3505	999 9683
*2	2	7201 3494	492 9043	998 5849	32	5	7930 6455	176 8027	999 2608
3	4 .	1140 0560	775 6482	0 6151	*33	6	1531 3202	423 2549	998 5533
4	5	4741 3307	22 1003	999 9076	34	1	5470 6268	705 9987	0 5835
5	6	8342 0054	268 5525	999 2001	35	2	9071 3015	952 4509	999 8759
*6	0	1942 6800	515 0047	998 4925	36	3	2671 9762	198 9030	999 1684
7	2	5881 9867	797 7485	0 5227	*37	4	6272 6509	445 3552	998 4609
8	3	9482 6614	44 2007	999 8152	38	6	211 9575	728 0990	0 4911
9	4	3083 3360	290 6528	999 1077	39	0	3812 6322	974 5512	999 7836
*10	5	6684 0107	537 1050	998 4001	40	1	7413 3069	221 0034	999 0760
11	0	623 3174	819 8488	0 4303	*41	2	1013 9815	467 4555	998 3685
12	1	4223 9921	66 3010	999 7228	42	4	4953 2882	750 1994	0 3987
*13	2	7824 6667	312 7532	999 0153	43	5	8553 9629	996 6515	999 6912
14	4	1763 9734	595 4970	1 0455	*44	6	2154 6376	243 1037	998 9836
15	5	5364 6481	841 9492	0 3379	45	1	6093 9442	525 8475	1 0138
16	6	8965 3227	88 4013	999 0304	46	2	9694 6189	772 2997	0 3063
*17	0	2565 9974	334 8535	998 9229	47	3	3295 2936	18 7519	999 5988
18	2	6505 3041	617 5973	0 9531	*48	4	6895 9682	265 2040	998 8912
19	3	105 9788	864 0495	0 2455	49	6	835 2749	547 9479	0 9214
20	4	3706 6534	110 5017	999 5380	50	0	4435 9496	794 4000	0 2139
*21	5	7307 3281	356 9539	998 8305	51	1	8036 6243	40 8522	999 5064
22	0	1246 6348	639 6977	0 8607	*52	2	1637 2989	287 3044	998 7988
23	1	4847 3094	886 1499	0 1531	53	4	5576 6056	570 0482	0 8290
24	2	8447 9841	132 6020	999 4456	54	5	9177 2803	816 5004	0 1215
*25	3	2048 6588	379 0542	998 7381	55	6	2777 9549	62 9526	999 4140
26	5	5987 9655	661 7980	0·7683	*56	0	6378 6296	309 4047	998 7064
27	6	9588 6401	908 2502	0 0607	57	2	317 9363	592 1485	0 7366
28	0	3189 3148	154 7024	999 3532	58	3	3918 6110	85 0529	0 0291
*29	1	6789 9895	401 1545	998 6457	59	4	7519 2856	85 0529	999 3216

TABLE LXXXVIII.

VALUES OF a, b, c PER DAY FROM MINA 1 TO MESHA 2, THE DAY OF MEAN MESHA-SAMKRĀNTI.

TABLE LXXXVII—Contd

Year	Week-day	a	b	c
*60	5	1119 9603	331 5051	998 6140
61	0	5059 2670	614 2489	0 6442
62	1	8659 9416	860 7011	999 9367
63	2	2260 6163	107 1532	999 2292
*64	3	5861 2910	353 6054	998 5216
65	5	9800 5977	636 3492	0 5518
66	6	3401 2723	882 8014	999 8443
67	0	7001 9470	129 2536	999 1368
*68	1	602 6217	375 7057	998 4292
69	3	4541 9283	658 4496	0 4594
70	4	8142 6030	904 9017	999 7519
*71	5	1743 2777	151 3539	999 0444
72	0	5682 5844	434 0977	1 0746
73	1	9283 2590	680 5499	0 3670
74	2	2883 9337	927 0021	999 6595
*75	3	6484 6084	173 4542	998 9520
76	5	423 9150	456 1981	0 9822
77	6	4024 5897	702 6502	0 2746
78	0	7625 2644	949 1024	999 5671
*79	1	1225 9391	195 5546	998 8596
80	3	5165 2457	478 2984	0 8898
81	4	8765 9204	724 7506	0 1822
82	5	2366 5951	971 2027	999 4747
*83	6	5967 2698	217 6549	998 7672
84	1	9906 5764	500 3987	0 7974
85	2	3507 2511	746 8509	0 0898
86	3	7107 9258	993 3031	999 3823
*87	4	708 6004	239 7552	998 6748
88	6	4647 9071	522 4991	0 7050
89	0	8248 5818	768 9512	999 9974
90	1	1849 2565	15 4034	999 2899
*91	2	5449 9311	261 8556	998 5824
92	4	9389 2378	544 5994	0 6126
93	5	2989 9125	791 0516	999 9050
94	6	6590 5871	37 5038	999 1975
*95	0	191 2618	283 9559	998 4900
96	2	4130 5685	566 6997	0 5202
97	3	7731 2431	813 1519	999 8126
98	4	1331 9178	59 6041	999 1051
*99	5	4932 5925	306 0563	998 3976
100	0	8871 8092	588 8001	0 4278

No. of days interval from 0 Mēsha	Month and day	Week-day	a	b	c
1	2	3	4	5	6
29	Mina 1	4	9502 4085	874 9589	915 1286
28	„ 2	5	9841 0404	911 2506	917 8664
27	„ 3	6	179 6724	947 5422	920 6042
26	„ 4	0	518 3044	983 8339	923 3419
25	„ 5	1	856 9364	20 1255	926 0797
24	„ 6	2	1195 5684	56 4172	928 8175
23	„ 7	3	1534 2004	92 7088	931 5553
22	„ 8	4	1872 8324	129 0005	934 2931
21	„ 9	5	2211 4643	165 2921	937 0309
20	„ 10	6	2550 0963	201 5838	939 7687
19	„ 11	0	2888 7283	237 8754	942 5065
18	„ 12	1	3227 3603	274 1671	945 2442
17	„ 13	2	3565 9923	310 4587	947 9820
16	„ 14	3	3904 6243	346 7504	950 7198
15	„ 15	4	4243 2563	383 0420	953 4576
14	„ 16	5	4581 8882	419 3336	956 1954
13	„ 17	6	4920 5202	455 6253	958 9332
12	„ 18	0	5259 1522	491 9169	961 6710
11	„ 19	1	5597 7842	528 2086	964 4088
10	„ 20	2	5936 4162	564 5002	967 1465
9	„ 21	3	6275 0482	600 7919	969 8843
8	„ 22	4	6613 6801	637 0835	972 6221
7	„ 23	5	6952 3121	673 3752	975 3599
6	„ 24	6	7290 9441	709 6668	978 0977
5	„ 25	0	7629 5761	745 9585	980 8355
4	„ 26	1	7968 2081	782 2501	983 5733
3	„ 27	2	8306 8401	818 5418	986 3111
2	„ 28	3	8645 4721	854 8334	989 0488
1	„ 29	4	8984 1040	891 1251	991 7866
	Mēsha 0	5	9322 7360	927 4167	994 5244
	„ 1	6	9661 3680	963 7084	997 2622
	„ 2	0	0	0	0

TABLE LXXXIX

SUN'S EQUATION OF THE CENTRE AND SINE-VALUES ACCORDING TO THE BRAHMA-SIDDHĀNTA.

Serial No of sine.	Sun's mean anom		Sine of anom angle — Value in minutes	Diff	Equation			Difference per minute of anom	Sun's mean anom		Serial No of sine.
1	2		3	4	5			6	7		1
	° '	° '	'	'	° ' "			"	° '	° '	
0	0 0	180 0	0		0 0 0				180 0	360 0	0
				214				2 27			
1	3 45	176 15	214		0 8 32 50				183 45	356 15	1
				213				2 2760			
2	7 30	172 30	427		0 17 2 61				187 30	352 30	2
				211				2 2458			
3	11 15	168 45	638		0 25 27 92				191 15	348 45	3
				208				2 2128			
4	15 0	165 0	840		0 33 46 05				195 0	345 0	4
				205				2 1822			
5	18 45	161 15	1051		0 41 57 02				198 45	341 15	5
				200				2 1287			
6	22 30	157 30	1251		0 49 55 97				202 30	337 30	6
				195				2 0755			
7	26 15	153 45	1446		0 57 42 97				206 15	333 45	7
				189				2 0117			
8	30 0	150 0	1635		1 5 15 60				210 0	330 0	8
				182				1 9372			
9	33 45	146 15	1817		1 12 31 46				213 45	326 15	9
				174				1 8520			
10	37 30	142 30	1991		1 19 28 17				217 30	322 30	10
				165				1 7502			
11	41 15	138 45	2156		1 26 3 32				221 15	318 45	11
				156				1 6604			
12	45 0	135 0	2312		1 32 16 92				225 0	315 0	12
				147				1 5646			
13	48 45	131 15	2459		1 38 8 96				228 45	311 15	13
				135				1 4369			
14	52 30	127 30	2594		1 43 32 27				232 30	307 30	14
				125				1 3305			
15	56 15	123 45	2719		1 48 31 62				236 15	303 45	15
				113				1 2028			
16	60 0	120 0	2832		1 53 2 24				1 0750	240 0	300 0	16
				101							
17	63 45	116 15	2933		1 57 4 12				0 9367	243 45	296 15	17
				88							
18	67 30	112 30	3021		2 0 34 87				0 7982	247 30	292 30	18
				75							
19	71 15	108 45	3096		2 3 34 49				0 6700	251 15	288 45	19
				63							
20	75 0	105 0	3159		2 6 5 36				0-5184	255 0	285 0	20
				48							
21	78 45	101 15	3207		2 8 1 99				0-3651	258 45	281 15	21
				35							
22	82 30	97 30	3242		2 9 24 14				0 2235	262 30	277 30	22
				21							
23	86 15	93 45	3263		2 10 14 43				0 0745	266 15	273 45	23
				7							
24	90 0	90 0	3270		2 10 31 19					270 0	270 0	24

No 12—THE KEDARPUR PLATE OF SRI CHANDRA DEVA

By Nalini Kanta Bhattasali, M A , Curator, Dacca Museum

In the October number of the *Dacca Review* for 1912, Mr. J T Rankin I C S published a note given him by the late lamented scholar B abu Gangadas .. L ... "U C ... a copper plate inscription of Śrī-Chandra-Dēva found at Idilpur in the Faridpur District of Bengal This note for the first time established the fact that a Buddhist ... .. "Chandra" at the end of their names had ruled in East Bengal with Vikramapura as their capital about the 10th or 11th century of the Chr ... L ... ... in Bengal have been busy thenceforth, dis ... the position of the Chandras and of Vikrama-pura in the chronology of their country The discovery of a ... plate ... of Śrī-Chandra-Dēva at Rāmpāl in the Munshiganj sub division of the Dacca D ... in April 1917 by Prof. Rādha-Gōvinda Basāk, M A gave a further impetus to the ... P J Basāk published this plate first in the *Sāhitya* and *Bulletin* ... ... *Sāhitya* for 1320 B S and finally in the *Epigraph ... Indica ...* Vol XII p ... 136

The present plate is the third of Śrī-Chandra-Dēva It was found in April 1919, in excavating earth from a ditch at Kedarpur in the Mādāripur subdivision of the Faridpur District of Bengal It was preserved in the custody of the ... and ... of the Kedarpur Middle English School I came to know of the find from a friend ... to ... ... for the Dacca Museum by the Hon'ble Mr T Emerson, C I E , I C S through the kind offices of Mr J N Roy, I C S, Magistrate of Faridpur, and Mr N S r, Sub-Divisional Officer of Mādāripur.

The plate measures 8½' × 7½', and is therefore slightly smaller than the plate published by Mr Basāk, which measures 9' × 8" The Royal Seal of the Chandras is attached to the middle of the top of the plate It displays the *Wheel of the law* with two conchant deer on the two sides, symbolical of the first "Turning of the Wheel of the Law" at the Deer Park,—the present Sārnāth near Benares It is noteworthy that the Pālas of Bengal who preceded the Chandras, and who were Buddhists as well, had similar devices on their seals The rant of Śrī Śrī-*Chandra-Dēva*[ḥ] is written in relief below the Wheel in the present seal

The plate is incomplete and appears to be no grant at all, but only a plate kept ready, with the stereotyped portion of the grant inscribed in the office of issue, to be filled in with the necessary remaining portions as occasion arose The plate is full of engraver's mistakes of a serious nature It may be noted that Kēdārpur, where this plate was found, contains the ruins of a royal settlement surrounded by a broad ditch as well as a big silted up tank, commonly associated with the memory of Kedār Rāy, one of the famous twelve chieftains who ruled Bengal before the country was completely dominated by the Mughals Kedār Rāy had his capital at Śrīpur, which, from the description of Ralph Fitch, appears to have been a flourishing town in 1585 , and the reasonableness of having a second capital, only a few miles off, is not very apparent Of course a thousand and one contingencies might have taken the present plate to Kēdārpur, where it has now been found, but the find of this unfinished plate also makes it possible that the ruins at Kēdārpur may be those of the Chandras who preceded Kedār Rāy by no less than five hundred years

The plate is inscribed on one side only and there is a vacant space of about two inches at the bottom The inscription contains 18 lines of writing The letters are 24 to 30 inch in height and are in most places well inscribed Mistakes of engraver or scribe are, however,

numerous and they have rendered the preparation of a correct text an undertaking of exceptional difficulty.[1]

The inscription refers to the reign of Śrī-Chandra-Dēva of the Chandra family of Kings who held sovereignty in East Bengal for some decades before the rise of the Varmans and the Sēnas in that part of the country, towards the end of the Pāla rule in North Bengal. It is written in what may be called the Bengali Script of the 10th-11th century A.D. The language of the inscription is correct Sanskrit verse, except in the portions spoiled by engraver's mistakes. The last three lines are in prose.

There is nothing very special as regards orthography. The use of va for ba is almost the rule in the later East Indian epigraphs, there being no discrimination between them, as in the modern Bengali language. The avagraha is once used and once omitted The spelling of the word nistriṅśa with ṅ is remarkable Superimposed r has doubled almost all consonants.

From a comparison of the abstract of the Idilpur plate of Śrī-Chandra published in the *Dacca Review*, referred to above, with the contents of the present plate, it is evident that the two plates are copies of the same draft. The Idilpur plate seems to have an extra *Ślōka* towards the end, borrowed from Śrī-Chandra's Rāmpāl plate, which is otherwise the copy of a draft different from that of the Idilpur and the Kēdārpur plates. It should be noted, however, that the opening invocatory *Ślōka* is identical in all the three plates

Śrī-Chandra seems to have been the only king of the Chandra family who was powerful enough to issue copper-plate grants, as the three plates hitherto discovered are all in his name. In order, therefore, to bring together all the epigraphical material available for his history, I quote below the necessary portions from Bābu Gangāmōhan Laskar's abstract of the Idilpur plate, as published in the *Dacca Review* The plate is reported to exist still, but it is in the custody of people who are unwilling to show it to anybody again.

[2] "The inscription gives the names of three kings —(1) Suvarnna-Chandra.   (2) His son Trailōkya-Chandra   (3) Trailōkya-Chandra's son (Śrī)-Chandra-Dēva   The last of these kings issues a command from his victorious camp at Vikrampur making a gift of certain lands at the village called Lēliyā in the Kumāratālakā sub-division (*mandala*) of the Satata-Padmā-vātī district (*vishaya*)   The nāme Satata-Padmāvātī literally means 'with-bank-Padmā-house' and was most probably the name of a district on the banks of the Padmā river. The names of some of the donees are still legible and the measures of the area of the granted lands are called *drōnas* and *pāṭakas*, as in the Āsrafpur plates   Paramount titles such as *Paramēśvara, Parama-bhaṭṭāraka* and *Mahārājādhirāja* are attached to the names of (Śrī)-Chandra-Dēva. The title Parama-Saugata (the devout worshipper of Sugata, i e Buddha) is prefixed to the name of the donor   The characters used are probably of the 12th century type of the Bengali alphabet The seal attached to the top of the plate resembles the seals found on the plates of the Pāla kings of Bengal   The inscription under notice is very important, as it, like the Āsrafpur plates of Dēvakhadga, shows the existence of Buddhist kingdoms in East Bengal in the period not much anterior to the conquest of Bengal by the Mussalmans

"   .   The plate is inscribed on one side fully and on another side partly   The writing on the second side has become almost defaced   This defaced portion contains the names of the donee and the particulars of the lands granted   There are altogether 36 lines of writing An analysis is given below —

Lines 1-4   Contain a verse in honour of Buddha, probably.

Lines 4-5   State that there was a king named Suvarṇṇa-Chandra who was neither purified in fire nor measured on the scales (like gold) but was by nature endowed with greatness (heaviness) and whose deeds were good.

Lines 5-6.   State in a verse why the king was called Suvarṇṇa-Chandra.

Lines 6-9   The above king got a son named Trailōkya-Chandra, whose look was sacred, who was afraid of the next world, by whom the living world was consoled, whose meritorious deeds were well known throughout the three worlds.

Lines 9-10.   Some further epithets of the same king who satisfied his desire of conquering the whole world and who extinguished the fire of his enemies.

Lines 11-13.   More eulogistic epithets (of Trailōkya-Chandra-Dēva).

Lines 14-15.   The above king had a son named (Śrī)-Chandra who was like Indra and whose prowess was like Indra and who was born at the auspicious moment and the signs at whose birth were indicative of royal fortune.

Lines 15-18.   Some eulogistic epithets of (Śrī)-Chandra-Dēva.

Lines 18-19   From the victorious camp pitched at Vikramapura,

Line 20, the devout worshipper of Sugata (Buddha), the meditator of the feet of (i.e. the son of) Mahārājādhirāja Trailōkya-Chandra-Dēva, the Paramēśvara, the Paramabhaṭṭāraka,

Line 21, the Mahārājādhirāja, the Śrīmān, Śrī-Chandra-Dēva, being in good health and having done honour to all the following royal officers and villagers assembled at the village of Lehīyā,

Line 22, in the Kumāratālakā-maṇḍala of Satata-Padmāvā(ti) district,

Line 28, thus commands the above officers . . . .

Lines 29-30   Contain the names of the donees."

The following is an abstract of the present Kēdārpur plate :—

The inscription opens with a salutation to the Buddha, the Dharmma, and the Sangha,—the three jewels of the Buddhist faith   It then goes on to say that there was one Pūrṇṇa-Chandra by name who was the possessor of large forces.   He was neither of royal birth nor of pure caste, but he obtained a son Suvarṇṇa-Chandra by name, resplendent as gold (v. 3).   Suvarṇṇa-Chandra was a famous man of religious character, and his son was Trailōkya-Chandra (v. 4) Trailōkya's conquests extended far and wide and he was a terror to his foes (v. 5).   Trailōkya's son was Śrī-Chandra who was extremely virtuous (v. 6).   He was a great conqueror whose fame at arms had reached the heavens (v. 7).   With this last king Śrī-Chandra-Dēva who was to have issued this plate from his victorious capital at Śrī-Vikramapura the inscription stops

I edit the inscription from the original plate, now in the Dacca Museum.

Seal.

श्री श्रीचन्द्रदेव[:]

TEXT

1 सिद्धिरस्तु¹ खस्ति । वन्द्यो जिन: स भगवान् करुणैकपात्रं
2 धम्मो'प्यसै³ विजयते जगदेकदीप: [।*] यत्सेवया

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¹ Expressed by a symbol   [This symbol is generally taken for om, but the writer has put forward arguments in his article " Some Image Inscriptions from East Bengal " published below in favour of this symbol being read ' Siddhir=astu '—Ed]

² Read धम्मों.   ³ Read सो.

3 सकल एव महानुभाव: संसारपारमुपगच्छति भिक्षुसङ्घ:¹ ॥[१*] पूर्व्वं-

4 चन्द्र इति श्रीमानासौवासिरेजं रज: । यस्योषष⁴योष⁵त्व[त]मातपत्रमपत्र-

5 पा:⁵। [२*] नाग्नी विशदो न तुलाधिरूढ: किन्तु प्रकल्प्यैव युतो ज्ञरिरणा । तथापि क-

6 ल्याणसुवर्ण्णकल्प: सुवर्ण्णंचन्द्रमुक्तो ततोभूत्⁶ ॥[३*] पुण्यावलोक: परलो-

7 कभीरोर्लोक्य: समाश्वासितजोवलोक: [।*] त्रैलोक्यसंकीर्त्तितपुण्यकीर्त्तें त्रै-

8 लोक्यचन्द्रोऽस्य व(ब)भूव पुत्र:⁶ ॥[४*] चतु:पयोराशिसमासपृथ्वीजयाभिलाषो वि-

9 पयेष्वलुब्ध: [।*] युद्धेषु निस्त्रिंशलताञ्जलेन यो वैरिवह्निं स⁷मयाञ्च कार⁸ ॥[५*]

10 श्रीमान् श्रीचन्द्रदेव: समजनि तनयस्तस्य सद्वर्म्मेव(ब)न्धो: क्रूरारम्भे स⁹यात्नु:

11 परगुणमुखरो दोषवादेकमूक: [।*] प्रेच्य: पीनो गुणाना निर्धिरिति

12 विषयासक्तिपचादिपच्चे यस्मिना(न्ना)धत्त वेधा¹⁰ श्रियमतिरभसादर्घ्यतो ना-

13 मतच्च¹¹ ॥[६*] स्पृष्ट: पार्थिवपांसुदीर्घरसघाघनदिग्गजै¹²र्नेत्राणामनिमे-

14 षत: परिवृतो दूरेण वन्दारकै: [।*] किंद्विग्रसरसामपूर्व्वंपलितभ्रान्तं

15 समारोपयन् सन्तानी रजसां रक्षिसु¹³षु जग्मिनो यस्य चुमार्गं गत:¹⁴ ॥ [७*]

16 स खलु श्रीविक्रमपुरसमावासितश्रीमज्जयस्कन्धावारात् परमसौगतो

17 महाराजाधिराज: श्रीत्रैलोक्यचन्द्रदेवपादानुध्यात: परमेश्वर: प-

18 रमभट्टारको महाराजाधिराज: श्रीमान् श्रीचन्द्रदेव. कुशली ।

TRANSLATION

(Line 1.) May success attend! May welfare accrue!
(Verse 1) Adorable is the Lord Jina, the only receptacle of mercy. Victorious also is the Law, the only light of the world. By worshipping them, all the high-minded Congregation of Bhikshus cross to the other side of the world.

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¹ Metre Vasantatilakā.
² Read प

³ Read दि. [This corrupt *pāda* has not been properly interpreted. The letter ज after य (°) is not seen on the impression. A plausible emendation which I would offer, with much hesitation though, is यस्मा[दिदं]प[*]चि [ये*]षु[स्व] and translate the passage thus 'afraid of which (i.e. dust) the enemy (kings) sought refuge under his parasol giving up (all) shame'—H K S

⁴ Read पं. Metre Anushtubh
⁷ Read ज्ञ
²⁰ Read वेधा..
¹² This line is proposed to be thus restored —स्पृष्ट: पार्थिवपांसुदीर्घरसघाघनेर्दिग्गजै.
¹³ Delete सु

⁵ Metre Upajāti
⁸ Metre Upajāti

⁶ Metre Indravajrā
⁹ Read द
¹¹ Metre Sragdharā

¹⁴ Metre Sārdūlavikrīdita.

(Verse 2.) There was one Pūrnna-Chandra by name, favoured of the Goddess of fortune, the bold canopy of dust raised by whose vanguard (in battle) was welcomed by the wives of the Sun-God.[1]

(Verse 3) By nature endowed with majesty, he was neither purified in fire (like gold or kings[2]) nor weighed in balance (like gold or like kings), yet from him came forth the meritorious Suvarnna-Chandra resplendent as gold

(Verse 4.) Of him, who was afraid of sinning against the other world and whose sacred fame was sung throughout the three worlds, was born the son Trailōkya-Chandra, the (mere) sight of whom was meritorious,—who was beautiful to look at, and who was a solace to mankind.

(Verse 5) Not fond of (the possession of) *vishayas* (districts) [or, devoid of covetousness], but bent on conquering the (whole) earth limited by the four oceans, he put out in battles the fire, viz his foes, by water, viz his creeper-like sword.

(Verse 6) To him, who was a friend of the right path, was born a son, the prosperous Srī-Chandra-Dēva who was kind (even) towards mischievous endeavours, full of praise for others' good qualities, (but) absolutely dumb to the exposition of (others') faults , a well-built figure, pleasant to the sight and a repository of all virtues Him, who was averse to all worldly attractions (*vishay-āsakti*), the Disposer forcibly endowed with Srī (fortune) both in name and in reality.

(Verse 7) The multitude of dust particles raised by the victorious (king) in battles, met by the Elephants, the lord of the (ten) quarters completely engrossed by the proud desire of coming in contact with the (aforesaid) kingly dust,[3] and avoided from a distance by the gods whose eyes could not close (against it), proceeded towards heaven, causing on the hair of the heavenly nymphs the unprecedented illusion of whiteness of old age.

(Lines 16 to 18) From his prosperous and victorious capital established at Srī-Vikramapura, he, the devout worshipper of Sugata, the Paramēśvara (great lord) Paramabhattāraka, (the great protector) Mahārājādhirāja (the paramount sovereign), the illustrious Sri-Chandra-Dēva, who meditates on the feet of the Mahārājādhirāja Srī-Trailōkya-Chandra-Dēya, in good health—.

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[1] [See above, page 191, note 3 —Ed]
[2] [The so called Agnikula Kshatriyas —Ed]
[3] [पार्थिवरजस् is the dust of the Earth It is a well known fact that elephants are fond of playing with dust —Ed]

No 13—A NOTE ON THE DATES OF THE GUPTA COPPER PLATES FROM DAMODARPUR.

By K. N. Dikshit, M.A.

The discovery of the Damodarpur plates has thrown new light on the fortunes of the Gupta dynasty in Eastern India. The plates have been edited by Mr. Radha Govinda Basak above Vol. XV., pages 113-145. I wish here to point out certain inaccuracies in the readings of the dates as read by Mr. Basak, which I first noticed when I read his paper and subsequently verified by reference to the original plates, now preserved in the Varendra Research Society's Museum at Rajshahi.

The date of the second plate which has been read by Mr. Basak as 129 is to be read as 128. The unit figure which is a vertical line with a slight bend, and a seriph or small horizontal line at the top end, must be taken as the symbol for 8, while the symbol for 9 has a loop at the top.

The fifth plate has lost the name of the reigning Gupta sovereign, but the date has been fairly well preserved. It has been read as 214, but I see no trace of a 'ten' in the second figure, but a clear 'tha' denoting 20, the date thus being 224. That some Gupta sovereign held sway over North Bengal as late as 224 G.E. or 543 A.D., that is eleven years after the date of the Mandasor pillar inscription of Yaśodharman (532 A.D.) is an important result. It is no longer possible to assume with Mr. Basak that the Gupta Emperor who made the grant was Bhānugupta [1] as the difference between the date of the plate and the only known date for Bhānugupta (स्त्र, 191 Gupta Era) is now 33 years. The fourth and fifth plates seem to be separated by a wider margin than that existing between any other two plates of the Damodarpur find. The intervening period of sixty years, roughly 164—224 Gupta Era (=483—543 A.D.) witnessed the gradual diminution of the Gupta dominion and the slow shifting of the centre of their power to the east. It also witnessed the rise and fall in succession of the Hūṇa chieftains Torāmāṇa and Mihirakula, and the transitory success of the Mālava chief Vishṇuvardhana Yaśodharman. Other dynasties like the 'Vardhana' kings of Thanesvar and the Maukhari rulers of Kosala were coming into power on the western outskirts of the Gupta Empire, the latter dynasty in particular having carried on an incessant warfare in Oudh and adjacent regions with the Guptas. It was probably the ascendancy of the Maukhari rulers in Ayodhyā that drove the 'noble born' Amṛtadēva (the donor of the fifth Damodarpur plate) from his native place Ayodhyā to the distant Pauṇḍravardhana province, which may seem to have been one of the last retreats of the Imperial Guptas. The Jaunpur inscription of the time of the Maukhari Īśvaravarman, though not dated, must belong to the same period as the fifth Damodarpur plate, as we know from the Haraha inscription that Īśvaravarman's son Īśānavarman had fully established himself in Oudh by 555 A.D.

No 14.—SOMALAPURAM GRANT OF VIRUPAKSHA SAKA 1389

By K. V. Subrahmanya Aiyar, B.A., M.R.A.S., Ootacamund.

This set of three copper-plates, marked No 2 in Appendix A of Rao Bahadur H. Krishna Sastri's Annual Report on Epigraphy for 1913-14,[2] is edited below for the first time with the help of one set of impressions kindly placed at my disposal by him.

The plates are reported to belong to a Kuruba ryot of Sōmalāpura in the Bellary taluka of the Bellary District. They were unearthed years ago while digging foundations for a house; but were secured in 1913, for the examination of the Assistant Archæological Superintendent,

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[1] [The reading at the end of l 1 in Plate V of the Damodarpur Plates is probably Kumāra.—Ed.]

[2] See also p 95, paragraph 25, of the same report.

Southern Circle, through the kind offices of the Tahsildar of the taluka, by the then Kanarese
Epigraphical Student, Mr. K Rama Sastri. Regarding the description of the plates Mr Krishna
Sastri has made the following note on the cover of the ink-impressions he sent to me :—

"Three plates with rounded tops of which the first and last are written on the inner sides
only. They are held together by a ring which passes through a round hole bored at the top of
each plate On the ring, which is nearly 2¾" in diameter and ¼" in thickness, slides a circular
seal shaped like a signet ring The seal measures 1½" in diameter and bears in relief on its
surface at the top the sun and the crescent and a standing boar facing the proper left Below
it is what looks like a floral device. The plates measure 9½" by 6⅛" The circular top measures
1½" from the base to the middle of the arc."

The plates are written in the Nandi-Nāgarī characters throughout excepting the syllables
"Śrī-Virūpāksha" at the end which are in Kannada The inscription is in a good state of pre-
servation the only places where the letters appear slightly damaged are at the commencement
of lines 20 and 68

The language of the inscription is Sanskrit verse from beginning to end. The description
of the boundaries in dēśabhāshā, promised by verse 46 (ll. 71, 72), is left blank for reasons
which cannot be guessed at this distance of time.

As is usual in the copper-plate grants of Vijayanagara kings, this record contains evident
mistakes of spelling such as the frequent substitution of sa for śa (ll 1, 4) and vice versâ (ll. 1,
3), tha for ta (ll. 5, 16), dha for tha (1 43), omission of visarga (ll 5, 8, 13) and its retention
in places where it has been changed into स (l. 42); unnecessary insertion of anusvāra (ll 37 and
38); etc Conjunct consonants are sometimes written side by side as in द्दयालु (l 2), पाषदरक्ष°
(l. 37) and खड्गायत. (l 33). In चतुषविं (l. 45) and भूद्य (l 12) the rules of sandhi have
not been properly observed न has been unnecessarily doubled in स्मिन्निदा° and visarga has
been changed into double र in गुर्व्वरेकं° (l. 27). Other instances of mistakes are चौत्र for सर्व
(l 45), सर्व for सर्व (l 13) and येनेष for वेनेष (l 17) As all the mistakes occurring in
the record have been corrected in the text or in the foot notes, they have not been given here in
more detail.

The first three verses are invocations addressed to Śiva, Ganapati and the boar incarnation
of Vishnu The fourth introduces the Moon, and the fifth refers to Yadu and Vāsudēva. The
historical portion commences with Saṅgama (v. 6). His son was Bukka. When he became king,
the prosperity of the Karnāta kingdom was permanently established (vv. 7 and 8). Harihara
(II) was born to him, he filled the quarters with the wealth of his charity (v 9) He had a
son named Pratāpa-Dēvarāya (I) by whom the Turushkas and hostile kings were overcome (vv.
12 and 13) His queen was Dēmāmbikā and their son was Vijayabhūpati, renowned for his
wisdom (v 14). Vijayabhūpati's son by Nārāyaṇīdēvī was Pratāpa, also called Praudhapratāpa
(v. 15), who obtained from his elder brother the kingdom of Ghaṇādri (v. 16) His son by
queen Siddaladēvī was Virūpāksha The titles Rājādhirāja (v 18), Rājaparamēśvara
(l. 42), Mūrurāyaragaṇḍa, Pararāya-bhayaṅkara and Hindurāya-Suratrāna and Chhurikā-
bhālanētra (v. 20) are given him It is said that he obtained the kingdom by his own prowess
and ascended the ancestral throne on the bank of the Tungabhadrā, in the presence of god
Virūpāksha (vv. 21 and 22).

In speaking of the ancestors of Virūpāksha, our record refers to the valour of Bukka I, the
munificence of Harihara II, the prowess of Dēvarāya I and the wisdom of Vijayabhūpati. The
same is pithily expressed in a single couplet elsewhere[1] thus :—

भक्तौ वृक्षमहीपालो दाने हरिहरेश्वर: ।
शौर्य्ये श्रीदेवराजोभ्रो ज्ञाने विजयभूपति: ॥

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[1] South-Ind Inscr., Vol I, p 163, verse 16.

The statement that when Bukka I, one of the two earliest sovereigns of the Vijayanagara dynasty, ascended the throne, the prosperity of the Karnāṭa kingdom was well established, is of particular interest to the student of history, as it seems to hint the probable fact that the Vijayanagara dominion was founded on the ruins of the Hoysala (i.e. the Karnāṭa) dominion, which was wrecked by the Muhammadan invasions of South India ; and shows also that the inveterate feud between the Vijayanagara kings and the Muhammadan monarchs should have risen even from the very inception of the new Hindu kingdom.   There is not much doubt that the country over which Bukka ruled was a portion of the Karnāṭa empire and that the Vijayanagara kings were the political successors of the Hoysalas

Of greater importance are the statements of our plates that Pratāpa, also called Prauḍhapratāpa, was the younger son of Vijayabhūpati, that he obtained from his elder brother,—showing clearly that he held a subordinate position under him,[1]—the government of Ghanādri, and that Virūpākaha II was his son.

The Satyamaṅgalam plates of Dēvarāya (II)[2] state that Vijayabhūpati had two sons of whom the elder was called Dēvarāya and the younger Pratāpi-Dēvarāya.   From this it is clear that both the sons had in common the name Dēvarāya   The existence of these two sons of Vijayabhūpati, though not with their names specified, is recognised in the three copper-plate grants of Virūpāksha known to us so far, viz. the Sajjalūr plates,[3] the Śrīśailam plates[4] and the present Somalāpuram grant   These, being directly concerned in tracing the main line of Virūpāksha, naturally enough, omit to mention the name of the elder   While the Śrīśailam plates call the younger Pratāpi-Rāya, the other two give the additional information that he was renowned by his title Prauḍhapratāpa   Thus, from all these sources it can be gathered that while the first son of Vijayabhūpati was known by the mere name Dēvarāya—with or without the common addition of Vīrapratāpa which is generally assumed by Vijayanagara kings—the younger was always called Prauḍhapratāpa or Pratāpa-Dēvarāya which is sometimes supplemented in stone records by the epithet gajaveṭṭai-kaṇḍaruṭiya.   Among the stone records of Vijayanagara kings, the following are clearly attributable to the second son of Vijayabhūpati :—

No. 92 of the Madras Epigraphical collection for 1918.	Dated in Śaka 1351 in the reign of Pratāpa-Dēvarāya, son of Vīra-Vijayarāya.
No. 91 of 1918 . . .	Dated in Śaka 1352 in the reign of Prauḍha[5]-Dēvarāya-Mahārāya, son of Vīra-Vijaya-rāya-Mahārāya.
No. 68 of 1918 : . . .	Dated in Śaka 1367 in the reign of Pratāpa-Dēvarāya-Mahārāya, son of Vīra-Vijaya-rāya-Mahārāya

Thus it is beyond doubt that the second son of Vijayarāya or Vijayabhūpati was not only called Pratāparāya and Prauḍhapratāpa, but had the additional name Dēvarāya suffixed to these names   Further, the Madras Museum plates of Dēvarāya II[6] refer to a younger brother of his named Śrīgiri who was governing Marntakanagara in A.D. 1424-5 and the Satyamangalam plates of Dēvarāya II, dated in the same year, imply that his younger brother Pratāpa-Dēvarāya was

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[1] If Mr. Rice has correctly read niyāgi-ajāprāptam=anādi-rājyam (p 136 of Ep. Carn, Vol. III), it is evidently a mistake of the engraver for nijagrajādi=prāpta-Ghanādri-rājyah given in our plates. His remarks (ibid, introduction, p 23) that Pratāpa or Prauḍha-pratāpa obtained the immemorial kingdom from his elder sister requires modification.

[2] Ep. Ind., Vol III, p. 37 f.

[4] Ep. Ind , Vol XV, pp 8 ff.

[4] This is a shortened form of Prauḍhapratāpa.

[6] Ep Carn , Vol III, pp 185 ff , XII 191.

[6] Ep. Ind , Vol VIII, pp. 306 ff.

ruling over the same district There is thus no doubt that Pratāpa-Dēvarāya is identical with Srīgiri and this fact has been pointed out by Mr Venkayya in his *Annual Report* on Epigraphy for 1906 (p 82) It may be added that the name Praudhapratāpa-Dēvarāya was already assumed by Dēvarāya I [1] A stone inscription of this second son under the name Srīgirināthā-Udayār, dated in Saka 1348, has also been discovered [2]

In the face of the inscriptional evidence furnished in a number of genuine copper-plate grants and stone records referred to above, we do not attach any value to conclusions differing from recorded facts as have been arrived at by the late Mr T. A Gopinatha Rao in editing the Srīsailam plates, where he has vainly attempted to show that there was but one son of Vijayabhūpati, by name Dēvarāya He has advanced no valid grounds for disproving the identity of Srīgiri with Praudhapratāpa-Dēvarāya, the second son of Vijayabhūpati.

The first two sons of Vijayabhūpati being known by the name Dēvarāya, it is but natural to mistake the sons of one of the Dēvarayas for those of the other. But the fact mentioned in our inscription, viz that Virūpāksha was the son of the second son of Vijayabhūpati, whom we have pointed out above to have borne the full name *gajavēttai-kandaruliya* Praudhapratāpa Pratāpa Dēvarāya, is of importance as it conclusively controverts the commonly accepted view, viz that Mallikārjuna and Virūpāksha were the sons of Dēvarāya II, the first son of Vijayabhūpati. In this connection, we may point out that two unpublished stone inscriptions furnish definite information. They come from Kundāni[8] in the Salem District and Conjeeveram[4] in the Chingleput District and state that Mallikārjuna and Virūpāksha were the sons of *Gajavēttai-kandaruliya Praudha-pratāpa-Dēvarāya-Mahārāyi* Here the mention of the epithet Praudhapratāpa makes it certain that the king referred to is the younger son of Vijayabhūpati. Another stone inscription of Virūpāksha,[5] dated in the cyclic year Sārvari, calls him the son of Gajavēttai-Pratāpa-Dēva-rāya It may be noted that while the mother of Virūpāksha was Siddhaladēvī, the mother of Mallikārjuna was Ponnaladēvī, who must have been two different queens of *Praudhapratāpa-Dēvarāya*, the second son of Vijayabhūpati

Our record is dated in Saka 1389, expressed by the word *nav-āshta-guna-bhū*, Sarvajit, Kārttiga month, bright fortnight, Utthāna-dvādasi According to Dewan Bahadur L D. Swamikkannu Pillai's 'Ephemeris,' this date corresponds to Monday, 9th November, A D 1467. It may be noted that the stone inscriptions of this king range in date from Saka 1387,[6] Vyaya to Saka 1407[7] from which it would appear that he ruled for at least ten years But the latter date is very doubtful as the record is damaged

The generals and officers of this king made known to us from inscriptions are Vittharasa, Odeya,[8] Sāluva-Tirumalarāya,[9] Sāluva-Narasimha,[10] and Singappa-(or Singana-) Dandanāyaka [11] Of these, Vittharasa-Odeya was in charge of Bārakūru and Mangalore which he was governing from Saka 1387 to 1398 Tirumalarāya was in charge of Trichinopoly and Sāluva-Narasimha developed into a usurper in later years Two stone records of Virūpāksha in particular are

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[1] No 138 of the Madras Epigraphical Collection for 1889,

[2] No 63 of the same collection for 1903

[3] No 203   ditto   1911.

[4] No. 39   ditto   1890

[5] No. 661   ditto   1904.

[6] Nos. 130 and 153 of 1901.

[7] No 398 of 1909

[8] Nos 30 and 153 of the Madras Epigraphical Collection for 1901

[9] *Kōyilolugu* makes mention of this chief—see *Ind Ant*, Vol XL, p. 141,

[10] See n to 6, below

[11] Nos. 29 and 153 of the Madras Epigraphical Collection for 1901,

worth mentioning in this connection, of which the one, dated in Śaka 1390, registers a gift by an agent of Sáluva-Narasimha, and the other, dated in Śaka 1394, records a gift for the merit of the same chief.[1]

The subjoined inscription registers (i) a gift of land situated to the west of the Hagari river within the boundary of the village of Yammegonuru in Muda-nadu, a sub-division of Hastinavati-rahita, to a Brahmana resident of Nittura, the son of Sárangirya, learned in the Vedas, Sānkhya and Mimamsā and reputed as the author of a work called *Bhishya-Bhushā*, (ii) gift of lands under the tanks called Krishna-taṭīka, Kariyakere and in the village of Chitukanahalu to another Brahman named Virupiksharya, a physician and the son of Rasesvara, and (iii) gift of the village of Somalapuram, with its name changed into Virupiksharpuram, to a certain Viranarya, who, in turn, appears to have distributed it among Brahmans, dividing it into 60 *vrittis* The distribution of the full 60 *vrittis* among Brahmans is not given But it is said that four Brahmans and three others connected with the issue of the copper-plate grant received 8½ shares The account for the rest is omitted, but it is evident from the blank space preceding verse 46 that possibly one or more plates containing the names of the rest of the *vritti* holders, which were intended to be inserted, have not been so done The description of the boundary marks too, which must have followed this verse, is omitted, as already remarked

Of the geographical names found in this inscription, Nittura, Chitukanahalu, and Somalapura are villages situated in the Bellary taluka, Hastinavati is another name for Anegondi near Hampi, Yammegonuru is in the Bellary taluka at the place where it borders on Hospet, and the river Hagari bears the same name even now. It is noteworthy that the old name Somalapura is retained at present while its later name Virupiksharpuram given in Śaka 1389 has not survived *Khāri*, according to the dictionaries, is equal to 3 bushels and perhaps indicates the extent of land by its sowing capacity The two tanks, Krishna-tatāka and Kariyakere, must be looked for also in the Bellary taluka

The composer of the grant was Durga-Bhaṭṭa, son of Mādhavārādhya, who figures also in Ml 121, and the engraver was the goldsmith Viranarya, son of Muddanārya[2] This engraver is perhaps identical with Viranarya, the father of Mallana, who incised the inscription Ml 121.

[The following metres are employed vv 1-3, 5, 7, 11, 14, 15, 17, 20-53, *Anushtubh*, vv 4, 10, *Śārdūlavikrīḍita*, vv 8, 12, 13, 16, 19, *Upajāti*, vv 6 and 18, *Upendravajrā*, v 9, *Mālinī*, and v 54, *Śālinī*.]

TEXT

First Plate.

1 श्रीगणाधिपतये नमः । नमस्तु(स्तु)गति(ग्धि)रघुंबिचद्रचामरचारवे । चे-

2 लोक्वनगरारंभमूलस्तंभाय भभवे ॥ [१*] रचाये जगतां भूयाद्दयाकुर्चि-

3 र्दाननः [१*] पाथःक्रोडाविधौ यस्य पवनंति पयोधयः । [२*] ³नमःश्र(स्तु)श्मै(स्मै) वरा-

4 चाय यदंष्ट्रागाऊमूर्द्धनि । ससद्वोपवतो पृथ्वी लीलांज्जब्योरट्दृश्य(श्य)तः⁴ । [३*]

[1] No 79 of the Madras Epigraphical Collection for the year 1919 and No 188 of the same collection for the year 1902

[2] The Śrīsailam plates were also incised by the same person (see above, Vol XV, p 19) where the name of the person occurs as Viranāchārya, son of Muddanāchārya

[3] Cancel the *visarga*   [4] Omit the *visarga*, श्रीसामूसिवदृय्यते is the reading in Ml 121

5 ¹अस्ति(स्ति) श्रोकमलालयानुजतया दीव्यन्नभोमंडलि नचन्द्राधिपति[:*] प्र-

6 भाभिरनिसं(शं) दि[ङ्म]डलोल्लासक[त्] [।*] चोराद्विपरमय क्वलानिधिरि-

7 ति ख्यातसु(सु)धांसु(शु)[:*] ख्(ख्)यं ।² नोक्ष्ये यग्य(श्य) चिभूयपत्वमगम-

   च्छभोर्भवा-

8 नीपति[:*] ॥ [४*] वंसे(शे) तस्येव संजातो यदुर्नाम सच्चोपति· [।*]

   यद्वंस(श)जेन भू-

9 [र]वा वासुदेवेन पालिता । [५*] यस्मिन्न्ङ्गरजिच्च°(ल्य)भंगुरभर⁴ प्रत्यर्थिपृथ्वी-

10 भृतां ⁶सार्यो(र्ये)भंगसुपागतैरपि गता दिङ्मडलो संभ्रमा[त्*] । तल्कीर्त्तिर्वि–

11 वरेषु⁶ गच्छति पुरो दिङ्नाथवृंदैर्वही सहत्त. यस्मिन्मौक्तिमंडन-

12 मणि[:*] श्रो(सो)भूट्ट(नृ)पः सगमः ॥ [६*] ततोभूद्धुक्कभूपालः सर्वभूप-

    कुलाग्रणी[:] ।*]

13 यव्वतापानले सर्व(र्व) पतंगत्वरिभूस्रतः ॥ [७*] वानीटलच्म्री[.*] सविलास[मा]-

14 स यस्मिन्नद्वीपे सह्चनोयकोक्तो(र्त्तो) [।*] भूमिस्तथैवाप⁷ वसुंधरात्वं स्थिरेति नाम

15 प्रथमं गुणोच्चे⁸ ॥ . [८*] छदयसुद[य⁹]येलादुच्चटुद्दासतेजा[:*] यस(श)धर

    द्वव बु(बु)क्कम्रा-

16 ⁹भतःस्त्रुंगमौलि । हरिचरनरपाल· प्रापदास[ो](श्रा)[:*] समस्था(स्ताः) करछत-

    वसुपूरै[:*]

17 पूरयन् पूर्णधामा ॥ [९*] येनाकारि कलौ(ल्लिः) क्षताधिकतरो येने(नै)व

    [घं]द्वापत(थ) का-

18 मंब्र(ब्र)द्वापथोजनो(नि)¹⁰ प्रस(श)मिताविषोपसर्गः परा(रं) [।*] येनांभोनिधि-

    मेखला वसु-

19 म[तो ध]मेंश संरच्च(च्य)ते तस्यानीकदिगीस(श)[य]पालि[त]¹¹यम्रोबिंबस्य कोनो-¹²

20 पम(मा) ॥ [१०*] [सं]ळादिवीति विख्याता श्रोपार्वत्योस्तु मैळना[त्*।]

    सासीज्जाया¹³ सच्चोभर्त्तु[:*]

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¹ M1 121 has स्वस्ति.   ² Delete the punctuation

³ जिच्च is also the reading in the Kannada text of M1 121 (see p 203 of *Ep Carn*, Vol III) ; but it is read as जिल्य in the romanised text given on p 135   Read यस्मिन् नगर°

⁴ Read °भरे   ⁵ सुद्धे° is the variant given in M1 121

⁶ Read वरेषु   ⁷ °तथा° is the reading in M1 121.

⁸ सु is a correction from पु , read गुणोच्चे.

⁹ Read भतसुद्मसौलि

¹⁰ M1 reads पयोजनी   ¹ त is a correction from षु

¹¹ The Kannada text of M1 121 has सेनोपमा (p 203 of *Ep Carn.*, III) and the romanised text has *naivōpama* ibid , p 135)

¹⁸ Another variant of this is चासोज्जार्या which is found in M1 121

21 स[र्व्वेथा]¹ गुणलचणा ॥ [१६*] इंद्र. खदोषं. परिच्छिन्नकाम्सो भूमावधोस्खा(स्व) म-

22 तिपन्न[रूप:] [।] प्रतापपूर्व:[*] किल देवराय. प्रतापतो भूमिमयवलय-

23 [स्व: ।] [१*] प्रातापयन्हौ⁶ परिज्रंभमाणि शुष्कास्तुष्का अपि यस्य
    राज्ञ: [।*] दि-

Second Plate, First Side

24 पुचितीय[१*]य निरस्तथेय: ³कातारवश्मीकछतात्सरचा: ॥[१३*] तस्य देमांवि-

25 काभर्त्तु: पुचः शत्रुप्रमर्दन: [।*] विद्यानिधिर्विंश्रेषज्ञो वीरो विजयभूपति: [॥ १४*]

26 तस्य नारायणिदेव्या⁴ प्रादुरासीदग्रोधन: । प्रौढप्रतापविभव: प्रता-

27 पाख्यो मह्रीपति: ।[१५*] गुणैर्रे(र)नैकै वनौतकेस्मिन्'न्विराजसानस्तु-

28 क्षातासकीर्त्ति: *।] निजाग्रजात्⁶ प्राप्तघनाद्रिराज्य: सार्थीकितार्थिव्र-

29 जपारिजात: ॥ [१६*] तस्य ⁷मिट्टलदेवीति भार्या सर्वगुणाश्रया ॥

30 लच्मीना(ना)र[१*]यणसे(स्ये)व स(ग्र)[चो]व⁸ नसुचिविधिष: ॥ [१७*] तस्यां
    त्रि(त्रि)व: प्रादुर्भू-

31 दुगाद्यो नाम्रा विरूपाच इति प्रसिद्ध: [।*] राजाधिराज: च्चितिपा-

32 लमौकि[व्वं]दान्यमूर्ति(र्त्ति): कल्रुणैकसिंधु: ॥[१८*] निजप्रतापा[द]धि[ग]-

33 त्य राज्यं समस्तभाग्य[:*] परिसेव्यमान: [।*] खड्गा(ग्र)मत:⁹ सर्व्वरिपून्वि-

34 जित्य स मोदते वीरविलासभूमि: ॥ [१९*] चु(छु)रिकाभालमिचो(चो)ति वि-

35 ख्यात: प्रतिपं(प)नधी: । सूद्रायरगंडाक* परराय(भ)यंकर: [।*]

36 चिंदुरायसुरत्राण इत्यादि विर[दो]वत: ॥ [२०*] तुगभद्रानदीती-

37 रे [।¹⁰ विरूपाचस्य सन्निधौ [।*] पिन्य¹¹ सिंघासनं प्राप्य पालयन्न(म्र)-
    वनीमिमां [॥ २१*] पु(पु)-

38 ख्ख्स्त्रीकाग्रग्रं(ग)ण्योसौ विरूपाचचितीस्व(ख)र: । धर्मंस्थामगतै[:]

39 सद्भि: संयुतो¹² धरणीसुरे:¹³ ॥[२२*] ग्रालिवाह्व(न)निर्णीतशकच-

40 च्चक्रमागसे । न[वाष्ट]गुणभूयुक्ते सर्वजिद्वत्सरे द्युसि [॥ २३*] मासि कार्त्तिक-

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¹ Perhaps the correct reading is सर्व्वथा or सर्व्वार्था, Ml 121 has अन्तर्धा

² Ml 121 has भद्रे , read प्रतापवह्री

³ Read कातार°   ⁴ Read देिव्या°   ⁵ Cancel न्.

⁶ See note 3, p 4, above   ⁷ Ml. 121 has सिद्दलदेवी.

⁸ सची नसुचिविधिष· is the reading in Ml. 121

⁹ The variant found in Ml 121 is सुग्रासम:.

¹⁰ Cancel the *danda*   ¹¹ दिव्य is the reading that occurs in Ml 121

¹² संयुक्तो is another variant found in Ml 121.

¹³ The Kannada text of Ml. 121 has धरणीसुरे:, but the romanised text reads correctly सुरे:.

2 ɴ 2

41 विख्याते खिते पच्च[च्चे] विग्रिपतः । उल्याना(न)द्वादसो(श्रो)युणा(ण्य)कान्ने
चापि दृपी-

42 त्तमः [।] [२४*] राजाधिराजः स्तेजस्ती यो राजपरमेश्वरः [।] [वि]रूपाच्च-
च्वितीशो-

43 ध(ख) धर्मबुद्धा युत सुधीः ।[२५*] श्रानेयाय ꞉ऩगऽयेवे निष्ठुरखरुणवासि-

44 ने । सां(सा)रंगार्यसुतायाथ सर्वेग्राखविदे तथा । [२६*] भाष्यभूयाका[रा]-

45 याथ सांख्यामोमांसवेदिने । ꞉सोवशास्त्रप्रवाणेय चतुप्(ष्प)टिकका(ला)-

46 नि(वि)दे [२७*] षडगसच्चितं वेदं वेदार्थं वेत्ति भूसुर. [।*] तस्मै
द्विजाय भू-

47 [पालो] द्वत्रिनावतिवक्षितगं(गा) ।[२८*] मूडनाङ्खित(तां) चेव ह्गरे[:*]
प[त्रि]-

Second Plate, Second Side

48 मे क्षितं(तां) । यंमेगीनूर सोंऩ्चेव ।꞉ खारो भूसिं मह्तोपतिः[: ॥*] [२८*]
प्रादात्तथा च स(म)द्वि-

49 तं चेव सस्यफलप्रद ॥[२८६*] भारद्वाजाय विदुपे ।꞉ रसेश्वरसु-

50 नाय च । विरूपाचार्यभिषजे ꞉रक्षाखा(खा)ध्या[यि]-

51 ने तथा ॥[२०*] खारिसप्रमाणं च [त]टाक्री क्रणसंज्ञिते[।*]
करियकेरेर्ये-

52 ति विख्याते खारित्रयसितां भुवं ।[३१*] चिटुक्तनाद्वाकु नाम्न्येव
खारित्रयसिता

53 भू(भु)वं । मिळिला खारिसंख्यां(ख्या) च त्रयोदश सुविश्रुता ॥[३२*] च(त)द्वस्तं
ग्राममेकं तु सो-

54 मळापुरनामकं [।*] अस्माकं भो विरूपाच्चमह्नीनाथ ददस्र नः꞉ । [६३*] द्[ति]

55 विज्ञाप्य भूभर्तुविंरूपा[च्च]मह्तोपतेः ꞉ । वि(सो)रणायें[:*] स्वयं लब्धा(ब्धा)
ग्रामं꞉ चा[च]

56 मह्तेश्व(ख)रात् ॥[३४*] मृ(शु)त्वा विज्ञापनं तस्य विरूपाच्चमह्नीपति[:*] ।
[३५*] निधिनिच्चे-

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¹ Delete the *visarga*
² Read ꞉ऩ°
³ Read सर्वेग्राख्रप्रवीणाय.
⁴ Cancel the *danda*
⁵ Read च्र
⁶ The *ē* of *रे* seems to have been erased in the original
⁷ Either the word ख्माक or न should be cancelled, otherwise there would be redundancy
⁸ We should have expected वीरशार्देण संबंधी ग्राममात For the pleonastic use of the words मह्तोपतेः and
मह्नीराात् see above, note 1

57 पसयुक्तां जलपाषाणमिश्रितं । अचिण्यागामिसंयुक्तां ।¹ सिद्धसाध्यस-

58 म्वितं ।[३६*] अष्टभोगैश्च संयुक्तां कुल्यारामसमन्वितं [।*] समस्तवक्किसंयु-

59 क्तां सर्वमान्यं फलप्र[दं] । [३७*] तुंगभद्रानदीतीरे विरूपाचस्य सं(स)न्निधौ[।*]

60 सहिरं(र)ण्योदक(क) दानधारापूर्वं यथाविधि [॥३८*] विरूपाचपुरं चेति-

61 प्रतिनाम विधाय च ॥ भोक्तुं दातुं द्विजेभ्यश्च प्रादादा[चंद्र]तारक । [३८*]

62 सोपि द्विजश्च संतुष्ट[.*] संयुतः परया मुदा [।*] अकरं(रो)दाग्रिषं राज्ञे
चिरं-

63 जीवी भवत्विति ॥[४०*] गोचं शाखा पितुनांम द्विजानां च यथास्थितं [।*]
लिख्यं-

64 ते वृत्तिसंख्याच पष्टिसंख्या यथाक्रमात् [॥ ४१*] श्रीवत्सो ²ऋगधीतश्च [वेम]~

65 ण्यायैसुतः सू(स)धीः [।*] मल्लिभट्टेति विख्यो(ख्या)तो वृत्तिमेकामिद्यास्युते ॥
[४२*] वासि-

66 ष्टो(ष्टो) ऋगधोतश्च³ वल्लंभट्टद्व[तः] सुधी[:*] । [दु]गोभट्टेति⁵ विख्याती
वृत्तिमे[का]मिद्यास्यु-

67 ते ॥[४३*] द्वारीती ⁶ऋगधोतश्च द्वपणार्य[स्]तः सुधी[.] [।*] [सारंगायश्च
वि]ख्यात[*] साधं[मेक]-

68 . .[स]: [॥ ४४*] आत्रेयोश्च ऋगध्येत भायण[र्य]स [नदन]: [।*] भायिभट्टो
द्विजश्रेष्टो(ष्टो) वृत्ति-

69 [द्वयमि]द्यास्युते ॥[४५*]

*Third Plate.*⁸

70 ⁰तैस्तै[स](स)मन्वितखिन्नै¹⁰दि-

71 द्यु प्रास्या(च्या)दिषु क्रमात् [।*] सोमानोख्या(ख्या)ग्रद्वारस्य लिख्यंते
देष(य)भाषया [॥४६*]

72 वासिष्टो(ष्टो) बं(व)ह्व(ह्व)चो विद्वान्

73 ऐतयार्यैसुतः सुधीः [।*] वल्लभो रायसखा(स्वा)मि(मौ) वृत्ति¹¹मेकामिद्यास्युते ॥
[४७*]

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¹ Cancel the *danda*.   ² च is a correction from स्.   ³—⁴ Read ऋगधीतश्च

⁵ Read °भट्ट इति   ⁶ Read ऋगधीतश्च   ⁷ Read ऋगधीता

⁸ At the top of this plate, a little below the right side of the ring-hole, is the letter रि which I am not able to
explain.

⁹ The line begins about the middle of the plate

¹⁰ Like वन्ही in line 23 न्ही is written with *n* preceding *ha* The grammatically correct form would be *vice
versá*.

¹¹ The two syllables मेका are written over an erasure

74 त्वष्टा श्रीसुद्ग्घ्याचार्यंस्तुः ग्रासमली[ख]कः [।*] वीरगः सगुणो धीमा[न्]

75 छत्तिसेद्ध्यामिणश्रुते ॥[४९*] ग्राचेयो याजुषो धीसान्माधा(ध)वाराध्यनंद-

76 यः [।*] ¹ग्रासनः¹ धंयङ्गविद्वान् दुग्गा(र्गा)भटोच वृत्तिभाग् ॥[४८*]
   दानपाल[नयो]-

77 र्म्मद्ध्ये दानाग्छे(च्छे)योनुपालनं [।*] दानात्स्व(ख्व)र्गंसवाप्नोति पालनादच्(च्यु)तं

78 पद ॥[५०*] खदत्तादि(द्वि)गुण पुं(पु)ण्य परदत्तानुपालनं [।*]परदत्ताप[हरि]-

79 या खदत्तं निष्फलं भवेत् ॥[५१*] खदत्ता(त्तां) ²परदत्तां वा यो हर(रे)त
   वसुं-

80 धरां । षष्टिर्वं[रूस]²वसाणि विष्टायां जायते कृि(क्र)मि[:*] ॥ [५२*]
   एकैव भगि-

81 नी लोके सर्वेषामेव भूभुजां [।*] न भोज्या न ख(क्ष)रग्राह्या(ह्या)
   विप्रदत्ता [वसुं]-

82 धरा ॥ [५३*] सामान्योेयं धर्मंसेतुं⁴न्तृपाणां काले काले पाल[नीयो]
   भवद्भि[:] [।*]

83 स्वर्वाने[ता]न् भाविनः पार्थिवेंद्रान् भूयो भूयो याचते राम[चंद्र:] ॥[५४*] ग्रो[॥*]

84 Śrī-Virūpāksha ⁵

TRANSLATION

(Line 1) Obeisance to Gaṇādhipati

(V. 1) Invocation to Śiva [by the common verse *namas=tunga*, etc.].

(V. 2) May the merciful elephant-faced (god), in the course of whose water-sport the oceans become (mere) ponds, protect the worlds

(V. 3) Salutation to that boar, at the tip of whose stalk-like snout, the earth, comprising the seven islands, seemed (*to possess the beauty of*) a lovely lotus

(V. 4) There is the Lord of stars (i.e. Moon), the younger brother of her who resides in the lotus (i.e. Lakshmī), who shines in the region of the firmament with his (lustrous) ray and constantly illuminates the quarters, who is born of the milk-ocean and is renowned as the depository of *kalas* (digits), himself being made of nectar rays and who has obtained the position of a jewel in the head of Śambhu, the consort of Bhavānī (i.e. Pārvatī)

(V. 5) In his family was born the king named Yadu, and this world was protected by Vāsudēva who was born in that family

(V. 6) There was king Sangama of good conduct, wearing Śaśimauli (Śiva) as an ornamental jewel, on whose victory in battles, the crowds of enemy kings heavily burdened (with numbers) though vanquished reach the cardinal points in great haste, (but) whose (i.e, the King's) fame moves further on (passing) through intervening spaces amidst lords of the (eight) directions

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¹ Cancel the *visarga* after ग

² The rest of this line and the next line up to बह्मि· are written on an erasure

³ Read °र्षेत्र°   ⁴ Read °सेतुर्न्तृपा°   ⁵ In Kannada characters

(Vv 7 and 8) Then came king Bukka, the foremost of the kingly race, in the fire of whose valour the hostile rulers were consumed as moths   In this king of great fame, the goddess of prosperity of the Karnita (kingdom) rested with pleasure   And the goddess of the earth also for the first time realised the (signification of her) names *Vasundhara* and *Sthira* on account of her qualities of bearing wealth and remaining permanent

(V 9.) Like the moon of bright lustre rising from the Udaya-Saila of lofty peak, king Harihara of rising full glory took his birth from king Bukka who wore a splendid crown and filled all the quarters with abundant wealth acquired by taxation as the moon with the exuberent lustre of his rays

(V. 10) What could stand comparison with him the reflection of whose fame is protected by the deities of the quarters, by whom the (stern) Kali age has been turned into one better than the (golden) Krita age, by whom was caused the highway of the school of philosophy which considers Duty (*Karma*) as god (Brahmi) free of all obstacles, and by whom the earth, having for (its) girdle the oceans, was ruled with justice

(V 11.) She, who was called Meladevi because she was a combination of Sri (*i e* Lakshmi) and Parvati and was in every way possessed of auspicious marks, was the consort of this king

(Vv 12 and 13) India, desirous of removing his stains, obtained on earth the form of this (king) and in the name of Devaraya, with Pratapa prefixed to it, ruled the world with his prowess   In the glowing fire of this king's valour, the Turushkas were scorched up and (other) hostile monarchs, with (their) bravery lost, sought self-protection in forests and ant-hills

(V. 14) The son of this husband of Demambika was Vijayabhupati, the destroyer of his enemies, the store-house of learning, of supreme knowledge and a hero

(Vv 15 and 16) To him, through Narayanidevi, was born the king called Pratapa, renowned as Praudhapratapa, who had fame for wealth   He shone on this earth with many virtues, obtained fame by meritorious deeds, got the (kingdom) of Ghanadri-rajya from his (uterine) elder brother and was a Parijata in granting their desired objects to crowds of mendicants.

(V 17) His wife was Siddaladevi, the resort of all good qualities, like Lakshmi to Narayana and Sachi to the enemy of Namuchi (*i e* India)

(V 18) Siva (himself) was born of her under the well-known name of Virupaksha, full of good qualities, a *rajadhiraja*, the head-ornament of kings, a munificent person and the one ocean of mercy

(V. 19) Acquiring the kingdom through his own prowess, attended with all kinds of prosperity, and conquering all his enemies with the point of his sword, he, as the play-ground of heroism, rejoices

(V 20) He who is renowned as *Chhurika-Bhalanetra* (*i e* Siva in wielding the sword) and ripe of wisdom holds the high (sounding) titles, such as *Murarayaraganda, Pararaya-bhayankara* and *Hindurayasuratrana*

(Vv 21 to 29) On the bank of the Tungabhadra river (and) in the presence of (the god) Virupaksha, having obtained his ancestral throne, this king Virupaksha, the foremost (among those) possessing noble virtues, rules the earth, surrounded by pious Brahmanas assembled in his court   In the course of the Saka years determined by the Salivahana-[Era], in the excellent year Sarvajit (corresponding to the year) expressed by *nine, eight, gunas* (three) and *bhu* (one) (*i e* 1389), on the auspicious occasion of *Utthanadvadasi*, in the bright half of the month of Karttika, he, the best of kings, the wise Virupaksha, a *rajadhiraja* (and) *rajaparamesvara*, of great valour, with the intention of making charity, made a grant to a Brahmana resident of Nittura who was the son of Sarangarya, who belonged to the Atreya-[*gotra*], and was a student of the Rik-[*Sakha*], who was well versed in all the *Sastras*, who knew the sixty-four arts

as well as the Sānkhya and the Mīmāmsā (systems of philosophy), who was learned in the Vēdas and the six *aṅgas* (branches) with their meaning, and who was the author of the *Bhāshya-Bhūshā*, of (one) *khān* of land situated to the west of the Hagari (river), within the boundary of (the village of) Yammegēnūru in Mūda-nāda and in (the sub-division of) Hastināvatī-valita.

(Vv 30 to 32) Again he gave to the scholar and physician Virūpāksharya, son of Rasē-śvara of the Bhāradvāja-[*gōtra*] and a student of the Rik-*Śākhā*, 7 *khān* of valuable land yielding grain and fruit under the tank called Krishna, 3 *khāri* of land under (the tank) known as Kariyakēre and of 3 *khān* of land in (the village) called Chitukanāhālu—thus in all, the number of 13 *khāris*.

(Vv 33 to 39) Having petitioned thus to king Virūpāksha "Oh! King Virūpāksha! grant me the village situated there named Sōmalāpura", Vīranārya obtained from the king the (said) village. On hearing the request, king Virūpāksha made, in the presence of the god Virūpāksha on the bank of the river Tungabhadrā, a *sarvamānya* gift with gold and water, accompanied by libation of water as laid down by rule, of the fertile village (Sōmalāpuram) with all its royal revenue[1], together with canals and gardens, with its name changed into Virū-pākshapuram,—for being enjoyed as long as the Moon and the Sun endure, or for being given away to Brāhmans,—together with the eight kinds of enjoyment, i.e (the right to own) the *nidhi*, *nikshēpa*, *jala*, *pāshāna*, *akshini*, *āgāmi*, *siddha*, and *sādhya*.

(V 40) The Brahman too, pleased and overpowered with joy, blessed the king with long life.

(V 41) (Here) will be written, in order, the *gōtra*, *śākhā* and the father's name and the names of the Brahmans. The number of *vrittis* (who received shares in the village) is sixty.

(Vv 42 to 45 contain the names of four of these donees.)

Verse	Name of the donee	Father's name	Gōtra	Śākhā	Number of *vrittis* owned
42	Malli-Bhatta	Hemanārya	Śrīvatsa	Rik	1
43	Durgā-Bhatta	Vallam Bhatta	Vāsishtha	Do	1
44	Sārangārya	Hampanārya	Hārīta	Do	1½
45	Bhāvi-Bhatta	Bhāyanārya	Ātrēya	Do	2

(V 46) The boundaries of this Brahman village (*agrahāra*) with their respective marks are written (below) in the language of the country, in the four directions commencing with the east, in order.

(V 47) The wise and learned Vallabha, son of Aitayārya, and the chief of the Secretaries (*Rāyasa*) belonging to the Vāsishtha-[*gōtra*] and the Bahvricha-[*Śākhā*], holds one *vritti* (in this village).

(V 48) The intelligent smith Vīrana of virtuous qualities, (who was) the engraver of this document and the son of the prosperous Muddanāchārya, holds one *vritti* (in this village).

(V 49) The learned and intelligent Durgā-Bhatta of the Ātrēya-[*gōtra*] and the Yajus-[*Śākhī*], the composer of this document and the son of Mādhavārādhya, owns one *vritti* (in this village).

(Vv 50 to 54) [Five of the usual imprecatory verses.]

(Line 54) *Śrī-Virūpāksha*.

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[1] The word वृत्ति has perhaps to be corrected into वृत्ति

No. 15.—THE BRAHMA-SIDDHĀNTA OF BRAHMAGUPTA, A D. 628

MEAN SYSTEM.

BY ROBERT SEWELL (I C S., RETIRED).

(Continued from Vol XVII, p. 187.)

321　The Tables published in my last article (*above*, *Vol. XVII*) enabled the dates of ancient Indian inscriptions and records to be verified according to the requirements of the *Brahma-Siddhānta* with, as basis of calculation, the "true" or apparent motions of sun and moon. This mode of reckoning appears to have been introduced in the 11th century A D　But the *Brahma-Siddhānta* was composed in A D 628 and for at least four centuries after its appearance details for the Calendar were almost certainly based on mean planetary motions, while it is believed that this mean system continued to guide the preparation of *pañchāngas* (almanacs) till a much later date—perhaps for several centuries in some parts of the country

For the correct verification, therefore, of early dates it is necessary for historians to be provided with a set of Tables based on mean planetary motions and the postulates of the *Brahma-Siddhānta* in addition to those based on mean motions and the postulates of the *Ārya-Siddhānta* The latter were provided in a previous article in this volume　The former are presented herewith　They cover a period of 800 years, from K Y 3700 to 4500, or from A D 599 to 1400

The system of work is the same as in all my previous Tables, that is to say, it is the system of Largeteau as adopted by Professor H Jacobi in the *Indian Antiquary*, Vol VIII, and in the *Epigraphia Indica*, Vol. XI　Full examples shewing the method of work, which is very simple, are given in my former articles, others, specially concerning the system of mean reckoning on *Brahma-Siddhānta* principles, are given below

In case of doubt as to which of the Tables already published should be used in the present case attention is directed to the accompanying § 329

322　In examining the dates of records in earlier years it is necessary to remember that the modes of reckoning adopted were not always the same as those used in more recent years. As to eras, reference to articles 6-12 of my former work, *Indian Chronography*, is recommended　For other matters the late Dr J F Fleet's remarks in the *Journal of the Royal Asiatic Society* for 1912, pp 704-5, will be found very valuable.

Especially let it be borne in mind that the lunar month reckoning in early years was probably carried out on the *pūrnimānta* system　According to the late Professor Kielhorn the earliest known date certainly in *amānta* reckoning belonged to the year A D 794　It is contained in the Paiṭhān plates of the Rāshṭrakūta king Gōvinda III (*Epig Ind.*, III, 105, *Ind Ant*, XVII, p 142, No 9). As regards these two systems, the *amānta* and *pūrnimānta* names of lunar months, see *Indian Calendar*, §§ 13, 45 (with Table on p. 26), 47 51 and the late Sankara Balkrishna Dikshit's footnote on p 31, also *Indian Chronography*, §§ 75, 76, p. 31.

Elements of the Brahma-Siddhānta mean reckoning.

323. The principal elements are fully stated in my former article on this authority (*above*, Vol. XVII, § 313)　For calculation on the mean system the following notes are necessary.

(i) The length of the mean sidereal solar year is 365^d 6^h 12^m 9^s, a fixture afterwards adopted by Bhāskarāchārya in his *Siddhānta-Śiromani*, A D 1150.

2 ş

(ii) The advance of a (distance of mean moon from mean sun)—which finally fixes the index of the *tithi* ($\frac{1}{30}$th of a mean lunation) in measurement by 10,000ths of circle—in every civil day of 24 hours and in hours, minutes and seconds, has already been given for the *Siddhānta-Śirōmani* in Tables LIV, A and B (*above*, Vol XV) These Tables are applicable to the *Brahma-Siddhānta*

(iii) For the sun's mean motion per day, hour, minute, etc, see Tables XLIII and XLIV (*above* Vol XIV)

(iv) The advance of a in one mean solar month is, in 10,000ths of circle, 307 349156595

(v) Each solar month consists of $30^d 10^h 31^m 0^s 75$ Table XCI below shews the interval of days, hours, etc, between the moment of mean Mēsha-*saṁkrānti*, when the mean sun is at celestial long 0° (*Table XC, cols 13-17*), and the moment of each subsequent *saṁkrānti* when the mean sun enters each of the twelve signs, and so enables the day and time when each mean solar month begins to be ascertained. The same Table gives the advance of a from its value at the moment of mean Mēsha-*saṁkrānti* to the same at each subsequent *saṁkrānti*

(vi) The interval between the moments of true and mean Mēsha-*saṁkrānti*, i e between the moments of the astronomical beginning respectively of the true and mean solar year, which interval we call the *sōdhya*, varies slightly year by year in consequence of the postulated shift of the sun's apsis (§ 313, VII, *above*) The exact intervals, century by century from KY 3700 to 4500, were given above in § 315 The Table is here repeated and extended so as to embrace the whole period of the general Table XC below The quantities were computed by Dr Robert Schram

TABLE B

(*above*, p 126)

VALUE OF *sōdhya* BY THE *Brahma-Siddhānta*

Kaliyuga	A D.	Sōdhya at beginning of centuries.				Days and decimals
		D	H	M	S	
3700	599-600	2	4	8	59 8128	2 1729145
3800	699-700	2	4	9	2 0160	2 1729400
3900	799-800	2	4	9	4 2192	2 1729655
4000	899-900	2	4	9	6 4224	2 1729910
4100	999-1000	2	4	9	8 6256	2 1730165
4200	1099-1100	2	4	9	10 8288	2 1730420
4300	1199-1200	2	4	9	13 0320	2 1730675
4400	1299-1300	2	4	9	15 2352	2 1730930
4500	1399-1400	2	4	9	17 4384	2 1731185

The moment of mean Mēsha-samkrānti, or the beginning of the mean solar year

324   The general Table which follows (Table XC, *cols 13-17*) states the moment of beginning of each mean solar year according to the *Brahma-Siddhānta*   The first entry is for the expired year 3700 of the Kaliyuga (A D 599-600), in which year the astronomical beginning is fixed as at $5^h 15^m$ after mean sunrise on Saturday, 21 March, A D 599   It is incumbent on me to prove the correctness of this fixture   Subsequent entries are based on it by the addition to it year by year of $365^d 6^h 12^m 9^s$ Proof may be offered in three ways :—(A) by comparison with the date and time already found for the beginning of the true solar year K Y. 3700, utilizing Dr Schram's determination of the interval between the two occurrences, (B) by comparison with the date and time fixed for the beginning of the same mean solar year according to the *First Arya-Siddhānta*, allowing for the time difference between the two authorities caused by their different estimate as to the length of the mean solar year, viz 21^s, (C) by direct computation from the moment in K Y 0 of mean Mēsha-*samkrānti*, 3,700 years earlier, which, according to the *Brahma-Siddhānta* (§ 313, v, above), was exactly at mean sunrise, or $0^h 0^m 0^s$ Lankā time, on Friday, 18 Febr (B C. 3102)

A

			h	m	s.
Moment of true Mēsha-*samkrānti* in K. Y 3700 (A D 599) (*Table LXXXII, Vol XVII, above*)	(5) Thur,	19 Mar	1	6	0 1872
Sōdhya as above (§ 323, Table) .	+ (2)	2	4	8	59 8128
Moment of mean Mēsha-*samkrānti* .	(0) Sat,	21 Mar	5	15	0

B

[See *Indian Calendar*, Table I, cols 13-17, for A D 599-600]

			h	m	s.
True Mēsha-*samkrānti* by Arya-Siddhānta	(5) Thur,	19 Mar	23	17	30
Arya-Siddhānta sōdhya . . .	+ (2)	2	3	32	30
Mean Mēsha-*samkrānti* by Arya-Siddhānta	(1) Sun,	22 Mar.	2	50	0
Less Time-difference in 3,700 years[1] .			— 21	35	0
Mean Mēsha-*samkrānti* by Brahma-Siddhānta	(0) Sat,	21 Mar	5	15	0

C

The epoch of the Kaliyuga was $0^h 0^m 0^s$ Lankā time, or exactly at mean sunrise on Friday   The length of the mean solar year being $365^d 6^h 12^m 9^s$, the beginning of the next mean solar year took place $6^h 12^m 9^s$ after mean sunrise, and after the expiration of a century from the epoch the mean solar year began at $20^h 15^m 0^s$ after mean sunrise, so that after 37 centuries had passed the mean solar year K Y 3700 began at $5^h 15^m 0^s$ after mean sunrise.

When this latter calculation is carried out century by century, the figures shew that centuries 6, 12, 19, 25 and 32, five in all, were defective centuries consisting each of 36,525 days, the remainder being common centuries of 36,526 days   Since 36,526 divided by 7 leaves no

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[1] See Table, § 273, in Article on the *Siddhānta-Śirōmani* (*Vol XV above*), which is equally applicable to the *Brahma-Siddhānta* , or refer to *Indian Chronography*, p 61   The time-difference in 8 000 years is $17^h 30^m$, in 700 years $4^h 5^m$, total $21^h 35^m$.

remainder and 36,525 divided by 7 leaves remainder 6, the results shew that whereas century 0 began on a Friday, century 37 began on a Saturday

Table XC therefore, as regards the moment of mean Mēsha-samkrānti in K Y 3700 expired, A D 599-600, is proved to be correct

*The beginning of the mean luni-solar year, i.e. the civil day on which the
tithi Chaitra sukla 1 expired, and the value of a (mean tithi-index)
at mean sunrise of that day. Amānta system*

325 In § 317 of my article on the *Brahma-Siddhānta* as calculated by the true motions of the sun and moon (*above*, Vol XVII) it will be seen that the value of a at mean sunrise of Sunday, 22 March, A D 599 (K Y 3700) was proved to be, in measurement by 10,000ths of a circle, 6567 108945284. The mean solar century, however, began on the previous day, Saturday, 21 March Deducting one day's value of a, viz 338 631985412, from the above, we find that at mean sunrise of that Saturday the value of a, or the mean moon's distance from mean sun, was 6228 476959872 This was its value at the beginning of the 37th century K Y Hence the first entry in Table XCII below which gives the values at mean sunrise on the day on which each century began The remaining figures in that Table were obtained by the addition to this value of the increase of a in a century [See § 316 of the same article The increase of a in a century of 36,525 days is 997 678896964, and in a common century of 36,526 days is 0 416684507] Centuries 38 and 44 were defective centuries, the rest were common ones For the beginnings of the odd years of centuries Table LXXXVII was used, the value of a there given being added to that for the century

Thus was determined the value of a at mean sunrise of the day on which each mean *solar* year begins (*see Example 1 below*) From this is found the value of a at mean sunrise of the day on which the *luni-solar* year begins

326 The first day of the luni-solar year is, according to the general rule, the civil day on which expired the first *tithi* of the bright half (*sukla*) of the *amānta* lunar month Chaitra, i e the *tithi* which begins at the moment of the first new moon after the Mīna-samkrānti, or at the moment of the new moon when that *amānta* lunar month begins within the limits of which the Mēsha-*samkrānti* occurs Having already established the value of a on the day in any year on which mean Mēsha-*samkrānti* occurred, we have to subtract from that value the increase of a in whole days between the two dates, the day on which the luni-solar year began being the earlier The first 30 days' entries in Table LIVA (*above, Vol. XV*) enable this to be done We select in that Table the a in col 3 the value of which is next lower than the a of mean Mēsha-*samkrānti*, and the Table then shews in col 1 the number of intervening days, and therefrom the European day and month, and, by subtraction, also (col 2), the week-day. Deducting the selected a from the a of mean Mēsha-*samkrānti*, we have the a of mean sunrise of the day, Chaitra *sukla* 1, on which the mean luni-solar year begins

Thus,—mean Mēsha-*samkrānti* of the year K Y 3700, A D 599-600, was shewn in § 325 to have occurred on (0) Saturday, 21 March A.D 599, at mean sunrise on which day the mean moon's *tithi*-index a was 6228 4770 In Table LIVA, amongst the values of a in the first 30 days, it is seen that the next lower value is 6095 3757 6228 4770−6095 3757=133 1013[1]. Col 1 shews that the interval of days was 18, and col 2 shews the week-day 4 Mean Mēsha-*samkrānti* occurred on (0) Saturday 0 (or 7)−4=3 Tuesday It is therefore found that the day Chaitra *sukla* 1, the first civil day of the mean luni-solar year, was (3) Tuesday, 3 March A D 599, and that the value of a at mean sunrise on that day was 133 1013, shewing the currency of the *tithi* sukla 1 This is the entry in Table XC below

It comes to the same thing if the a of Table XCIII below is added to the a of mean Mēsha-*samkrānti*, the Table being prepared for that purpose The a of mean Mēsha-

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[1] All values of a below 333 3 prove the *tithi* to have been the first of the *amānta* lunar month, i e., the first tithi of the first (*sukla*) fortnight

samkrānti was 6228 4770. We select such a value of *a* in col 3 of that Table as, added to the former, makes a value between 0 and 333 $\frac{3}{3}$, the limits of the *tithi śukla* 1, and note the interval of days, and the week-day resulting by addition of the given week-day (col 2) to the week-day of mean *Mesha-samkrānti* Here the selected value of *a* is 3904 6243, since 6228 4770 + 3904·6243 = 133 1013 The interval of days is 18 (col 1) The week-day corresponding to the day Chaitra *śukla* 1 is (0 + 3 =) 3 The result is the same as obtained by the former process

All the entries in the general Table XC, cols 19-23, can be proved in this way

To find the exact phase of the mean moon, i e the mean *tithi*-index *a*, on any day of any year, or at any particular moment of any day, it is only necessary to add to the value of *a* given in col. 23 of Table XC for the first day of the luni-solar year the amount of increase of *a* during the intervening whole days, hours, etc , given in Tables LIVA and B (*above*, Vol XV)

The pūrnimānta system of lunar months

327 The *amānta* lunar month begins at the moment of new moon, the *pūrnimānta* month at the moment of full moon a fortnight earlier, so that the fortnight (*śukla*) between new moon and full moon bears the same month-name by both systems, while the fortnight (*krishna*) between full moon and new moon bears, in the *pūrnimānta* system, the name of the lunar month next after that which it bears in the *amānta* system The *śukla* fortnight of the first lunar month, for instance, belongs to Chaitra by both systems The following *krishna* fortnight, however, belongs to Chaitra by the *amānta* system, but to Vaisākha by the *pūrnimānta* system

This should always be borne in mind when examining dates of inscriptions, especially in earlier years For references to already published explanations see § 322 above, and for a Table of corresponding fortnights and lunar months see *Indian Calendar*, Table II, Part I

The mean moon's nakshatra

328 The note on this subject already given (§ 308) in dealing with calculation by the *First Arya-Siddhānta mean system* (*above*, Vol. XVI) applies equally to the *Brahma-Siddhānta* mean system It is unnecessary to repeat it

Tables LXXX and LXXXI, fixing the sun's mean longitude for every day of the mean solar year according to the *First Arya-Siddhānta*, may safely be used for general calculation by the *Brahma-Siddhānta*, since the difference between the two authorities in their estimates of the length of the year only amounts to 21 seconds [1] But in any exceptionally close case the exact value, at mean sunrise of any day in the year, of *s*, or the sun's mean longitude, can be found by multiplying the sun's mean motion in one day (Table XLIII, Vol XIV *above*), by the number of days' interval between the day on which mean Mesha-*samkrānti* occurred and the given day. The sun's mean motion in one day by the *Brahma-Siddhānta* is 59^m 8^s 172655, or in 10,000ths of circle 27 377875426

The *Rule for work* is as follows   (i) Find, as above, value of "*a*" at mean sunrise of given day   (ii) Note number of whole days intervening between the day of mean Mesha-*samkrānti* (Table XC *below*, col 18, *figure in brackets*) and the given day Turn to Table LXXX and note the increase of sun's mean long , "*s*", during that interval Deduct from this, by Table LXXXI, the increase of long during the hours and minutes stated in col 17 of Table XC The result is the sun's mean long , *s*, at mean sunrise of given day   (iii) *Add* *s* to *a* This = *n*, the required index of the mean *nakshatra*, or the mean moon's place in the heavens at that moment Table LXVIII above, or Table VIII, *Indian Calendar*, will shew in which *nakshatra* the mean moon stood at the time

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[1] In measurement by 10,000ths of circle the total difference in 365 days is 0 00665, by which amount the *Brahma-Sidahānta* is the greater

The 19-year intercalation cycle

329 [See *Indian Calendar*, § 50, p 29, and notes in previous articles above on the working of the cycle by different systems] The sequence in the present case works perfectly regularly except in four instances In every case except these, after four successive intercalations of the same lunar month at intervals of 19 years each, the intercalated month gives way to the month next preceding it The exceptions are—a run of five mean intercalary Bhādrapadas between A D 746 and 822, five Āśvinas between 952 and 1009, five Kārttikas between 1120 and 1196, and five Paushas between 1231 and 1307

Working Tables

330 For general guidance the following Tables, as given for work by the *Ārya-Siddhānta* (*above*, Vol XVI), should be used, or the similar Tables published in the *Indian Calendar*

Table LXII, or *Ind Cal*, Table II, Parts I and II, for names of months and *nakshatras*

Table LXIIIA, or *Ind Cal*, Table III, Part I, for collective duration of mean lunar months

Table LXVIII, or *Ind Cal*, Table VIII, for indices of *tithis, karanas, nakshatras* and *yōgas*.

Table LXIX, or *Ind Cal*, Table IX, for the serial number of days of the year and their names and numbers in European reckoning

Table LXX, or *Ind Cal*, Table X, for conversion of the indices of *tithis, nakshatras* and *yōgas* into time

Table LXXI, the European Calendar for 23 centuries [Table XIII, *Indian Calendar*, may also be used, but the former is easier]

Table XCI below gives the collective duration of mean solar months, measured from the moment of mean Mēsha-*samkrānti*, the astronomical beginning of the mean solar year, also the increase of *a*, the mean *tithi*-index, during the interval

Table XCII shews the value of *a* at the beginning of each mean solar century of the Kaliyuga, that is to say, its value at mean sunrise of the day on which each such solar century began

For odd years of such centuries Table LXXXVII (*above*, *Vol XVII*) is to be used in conjunction with Table XCII, addition of the two given values of *a* yielding the value of *a* at mean sunrise of the day on which each mean year of the Kaliyuga solar century began

For increase of *a* in subsequent days, hours, etc, in any K Y year, or any moment of any day Tables LIVA and B (*above*, Vol XV) are to be used

The use of Table XCIII is explained in § 326 above

Table XCIV-A to F enables the units and decimals of units of results obtained from our system of reckoning in measurement by 10,000ths of a circle, to be converted readily into time, if required The same can be converted into space-measurement in degrees, etc, by Table XLVB (*above*, Vol XIV)

EXAMPLES

[N B —Work may always be done in whole numbers, resorting to decimals only in close cases]

Example 1 To find the mean tithi-index, or phase of moon, at mean sunrise of the day on which mean Mēsha-samkrānti occurred in any year

This is a necessary operation for finding the *tithi*-index *a* at the *moment* of mean Mēsha-*samkrānti*, which is obtained by addition of the *a* of subsequent hours, minutes, etc, to the *a*

of mean sunrise   [The intercalation of lunar months is decided by the value of *a* at the moment of mean Mōsha-*samkrānti*] Two cases are considered, A and B

A Take the year Kaliyuga 3851 expired This was the Śaka year 672 expired It began (Table XC, *cols 13-17*) astronomically at 5^h 49^m 39^s after mean sunrise on Sunday, 22 March A D 750 We want to know the moon's phase, as shewn by the *tithi*-index *a*, at mean sunrise of that day ["*w -d* "=week-day]

		u d	*a*
(*Table XCII*) At beginning of K Y Century 38, mean sunrise	(0)	5100 3761
(*Table LXXXVII*) At beginning of K Y year 51, do	(1)	8036 6243
At mean sunrise on the Sunday in question . . .	(1)	3137 0004

B The year K Y 3849, Śaka 670 both expired This began (*Table XC*) at 17^h 25^m 21^s after mean sunrise on Thursday, 21 March A D 748 The first result shews the *a* for mean sunrise on Friday, 22 March, and the *a* for one day has to be deducted This is due to the fact that Table LXXXVII has to serve for all K Y centuries, common or defective The correction required is never more than that for one day

		u d	*a*
(*Table XCII*) At beginning of K Y Century 38, mean sunrise	(0)	5100 3761
(*Table LXXXVII*) At beginning of K Y year 49, do	(6)	835 2749
At mean sunrise on Friday, 22 Mar	(6)	5935 6510
Deduct one day's value of *a* . . . .—	(1)	—338 6320
At mean sunrise on Thursday, 21 Mar . . .	(5)	5597 0190

Example 2   To find the civil day corresponding to Chaitra śukla 1, or the first civil day of the luni-solar year , and the value of a *(place of mean moon) at mean sunrise thereon*

The civil day corresponding to mean Chaitra *śukla* 1 is that on which the mean *tithi* " *śukla* 1 " expired The *tithi*-index (*a*=) 333 3 marks the last instant of the first *śukla tithi*, so that we have to find a day on which at mean sunrise the *tithi*-index *a* was between 0 and 333 3 The *amānta* lunar month called " Chaitra " begins with the first new moon after the Mina-*samkrānti*, and the civil day called " Chaitra *śukla* 1 " is necessarily earlier than the day on which mean Mōsha-*samkrānti* occurred We have to find the number of days' interval between those two days There are two ways of ascertaining these points, one by using Table XCIII and adding its figures, one by using Table LIVA and subtracting its figures

(1) Take the year in Example 1, A, above The value of *a* at mean sunrise of Sunday, 22 March A D 750, was found to be 3137 0004 We turn to Table XCIII and select in col 3 such a value of *a* as, added to 3137 0004, will result in a total value of *a* between 0 and 333 3 This is found to be 6952 3121, the sum of the two (always disregarding quantities over 10,000) being 89 3125 The interval of whole days from mean Mēsha-*samkrānti* day was 9 (col 1) Adding the number of the week-day (col 2), viz 5, to the week-day of mean Mēsha-*samkrānti*, viz 1 Sunday, we have the week-day 6 Friday Mean Mēsha-*samkrānti* occurred on Sunday, 22 March , and, therefore, it has been determined that the day Chaitra *śukla* 1, the first day of the luni-solar year, was Friday, 13 March A D 750, on which day, *a* being 89 3125, Chaitra *śukla* 1 was the current *tithi* at mean sunrise

Similarly in Example 1, B At mean sunrise of (5) Thursday, 21 March A D 748, *a* was 5597 0190 Add (Table XCIII, *col 3*) 4681 8882 Result 178 9072. The interval of days was

(*col 1*) 16 The week-day number was 5 The week-day of 21 March was 5 (Thursday) Hence the week-day 16 days earlier was 5+5=3 Tuesday So the beginning of the mean luni-solar year was on Tuesday, 5 March A D 748, on which date at mean sunrise the mean *tithi* " *śukla* 1 " was current, the value of *a* at that moment being 178 9072.

The entries in Table XC against these years correspond to these results

(ii) The same results are obtained by using Table LIVA (*above*, Vol XV) and deducting the figures for the interval of whole days between the two occurrences We note that value of *a* in the first 30 days of that Table which is next lower than the value of *a* already found for the day of mean Mesha-*samkrānti*, and deduct the former from the latter The number of intervening days (*col 1*) and the number of week-days (*col 2*) stand against the selected entry This week-day number is deducted, of course, from the week-day of mean Mesha-*samkrānti* Thus—

A For K Y 3851, A D 750

		w-d	a.
(*Example 1, A*) For mean sunrise on Sunday, 22 March A D 750.	(1)		3137·0004
(*Table LIVA*) Next lower value of *a*, and week-day	—(2)		—3047 6879
At mean sunrise of the day Chaitra *śukla* 1 . . .	(6)		89 3125

The interval of days (*col 1*) was nine 6=Friday Hence the day corresponding to Chaitra *śukla* 1 was Friday, 13 March, and at mean sunrise the mean *tithi* Chaitra *śukla* 1 was current, the value of *a* being 89 3125

B For K Y 3849, A D 748

(*Example 1, B*) At mean sunrise on Thursday, 21 March,	(5)		5597 0190
(*Table LIVA*) Next lower value of *a*, and week-day .	—(2)		—5418 1118
At mean sunrise of the day Chaitra *śukla* 1 . . .	(3)		178 9072

The interval of days was 16 3=Tuesday Hence the day corresponding to Chaitra *śukla* 1 was Tuesday, 5 March A D 748, and at mean sunrise the value of *a* was 178 9072

These results are the same as those found by the former process The examples enable any worker to prove the correctness of all my entries in cols 19-23 of the general Table XC below

Example 3 To find if a lunar month was or was not intercalated in the given year

It will be enough, for this problem, to refer to Example 3 (*above*, Vol XVI) of my article on the *Ārya-Siddhānta—mean system* The work here is precisely similar, but for the values of *a* for hours and minutes Table LIVB (*Vol XV above*) should be used, and Table XCI for the advance of *a* during the mean solar months, etc

Example 4 To find the mean *tithi-index* a, shewing phase of moon, at mean sunrise of any day in the year, or at any moment of any day.

Table XC (cols 19-23) gives the civil day corresponding to mean Chaitra *śukla* 1 (the initial day of the mean luni-solar year), its serial number (in brackets) from January 1st of the equivalent A D year, and the mean *tithi*-index *a* at mean sunrise Calculate by Table III, or by Table LXIIIA (*above*, Vol XVI) the interval of whole days from that day to the given day, and, if necessary, the excess of hours, minutes, etc, to the given moment on that day. Add the increment of *a* for the interval of whole days from Table LIVA and for fractions of days from Table LIVB to the *a*, as above, of the initial day, as also the number of days' interval and the corresponding week-day.

E g　Required the *tithi*-index at mean sunrise of the day called "Āshāḍha *śukla* 4" in Saka 547 expired, or A D 625-26, and the corresponding A D day and week-day

In this year there was no intercalated month　The interval from the day "Chaitra *śukla* 1" to the day "Āshādha *sukla* 4" is approximately (Table LXIII-A above, p 335) 93 days. We try this—

	d	w -d	a
Table XC　Chaitra *śukla* 1, mean sunrise	(74)	(6)	184·6506
Table LIVA for 93 days	+(93)	(2)	1492·7746
	(167)	(1)	1677 4252
This value of "*a*" (*Table LXVIII*) shews that the 6th *śukla tithi* was current at mean sunrise　∴ Deduct for 2 days	—(2)	—(2)	—677 2640
At mean sunrise on Āshādha *śukla* 4	(165)	(6)	1000·1612

Table LXVIII or VIII *Indian Calendar*, shews the currency of the 4th *śukla tithi*, at that mean sunrise, since its first point is when *a*=1,000　Day 165 was (*Table IX, Indian Calendar, or LXIX, above*) 14th June A D 625　6=Friday　We learn, however, that the 4th mean *tithi* had begun only about ¼ of a minute before the moment of mean sunrise, so that if the basis of calculation had been the moment of true sunrise (a little earlier than mean sunrise) the corresponding day might have been Thursday, 13 June

Example 5　To find the nakshatra, or place in the heavens of the mean moon, at mean sunrise of any day or of any later moment in the day

Take the case in the last example　It is required to find the value of "*n*" the *nakshatra*-index, at mean sunrise of the day called, in the mean system, "Ashādha *śukla* 4" in the given year, A D 625

The mean *tithi*-index, "*a*", at that mean sunrise was found to be `1000 1612　Since *s+a=n* (§ *327 above*), we have to ascertain the value of "*s*", the sun's mean longitude at that moment

The day, 14 June, was the 165th day after Jan. 1 in that year.　Mean Mēsha-*samkranti* had taken place on (Table XC, *cols. 13-17*) the 79th day at 22ʰ 30ᵐ 54ˢ after mean sunrise.　The day 14 June was (165−79) 86 days later.　We proceed as follows —

		s
Table LXXX, *p 444*　Interval of 86 days		2354 4957
Less (Table LXXXI) for 22ʰ	25·0964	
30ᵐ	0 5704	
54ˢ	0 0171	
	25 6839	−25 6839
At mean sunrise on the day Āshādha *śukla* 4 sun's mean long., "*s*" =		2328 8118
Add "*a*" as already found for that moment		1000 1612
At mean sunrise on that day "*n*" =		3328 9730

This last is the required *nakshatra*-index　Reference to Table VIII, *Indian Calendar*, or Table LXVIII (*above* Vol. XVI) shews that the moon was then in the *nakshatra* Aślēshā by the

2 G

equal-space system of division of the ecliptic, which ended when "n" = 3333 3, but that by the system of Garga or the *Brahma-Siddhānta* (our present authority) she was in Maghā, of which the ending points are respectively 3518 5 and 3477 1 Converted into degrees (Table VIII-B, *Indian Calendar*, or Table XLV-B, *above*) the moon at that mean sunrise stood at about 119°51'

For the value of "n" at any later hour of the given day the index-value for the time since mean sunrise must be added (Table LXXXI) to the "n" of mean sunrise At about 3 hours 50 min. after mean sunrise, for instance, the mean moon entered Maghā by the equal-space system, for the beginning point of that *nakshatra* is 3333 3 The increase of "n" in 3 hours 50 min. is 4 3728, and 3328 9730 + 4 3728 = 3333 3458

Example 6 To find the yōga, "y", at the same moment as in Example 5

The formula for finding the *yōga*-index is either $s + n =$"y", the *yōga*-index, or, in cases where it is not necessary to calculate n (the *nakshatra*), 2 "s" + $a =$ "y" Here, at mean sunrise on 14 June A D 625, we have found "s" = 2328 8118 and "n" = 3328 9730 The *yōga*-index, "y", therefore, = 5657 7848, and reference to Table VIII, *Indian Calendar*, cols 12-13, or Table LXVIII (*above, Vol XVI, cols 6, 8, 9, 10*), shews that the mean moon was at that moment in the *yōga* Siddhi Again 2 s = 4657 6236, and this + "a," which was found to be 1000 1612 = 5657 7848, the same as before.

'

TABLE XC

REMARKS

K Y 3736 expired, A D 635-36   A very close case in the matter of intercalation of lunar month   Mean new moon occurred about 2^m after the moment of the Karka-samkrānti (mean sun at long 90°), and, therefore, at that moment the mean moon was waning, while she was waxing at the next, Simha-samkrānti (mean sun at 120°)   Accordingly the intercalated month was Śrāvana

K Y 3923 expired, A D 822-23   According to the 19-year sequence of intercalations the same month is generally intercalated four times running, i e at intervals of 19 years each Here, however, is an instance of a fifth intercalation of the same month   [See § 329 of text above]

K Y 4110 expired, A D 1009-10   A similar case   Āśvina intercalated for the fifth time

K Y 4297 expired, A D 1196-97   Another   Kārttika intercalated for the fifth time

K Y 4408 expired, A D 1307-08   Another   Pausha intercalated for the fifth time. This was a very close case   The moment of mean new moon was about 1 minute after the mean sun reached the Dhanus-samkrānti (mean sun at long 240°), but she was actually waning at the moment of the samkrānti and was waxing at the next, Makara, samkrānti   Consequently the lunar month Pausha was intercalated

TABLE

Mean System Table,

Numbers of columns conform

(Cols 1 to 4)—The years herein stated are the *current* years corresponding

(Cols 6 and 7)—Samvatsara-names of mean solar years in *italics shew cases*

CONCURRENT YEAR						JOVIAN SAMVATSARA		Mean intercalated (adhika) lunar month
Kali	Saka.	Chaitrādi Vikran	Mēshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3701	522	657	6		599 600	50 Anala		...
3702	523	658	7		*600 01	51 Pingala		2 Vaisikha
3703	524	659	8		601-02	52 Kālayukta		..
3704	525	660	9		602-03	53 Siddhārthin		10 Pausha
3705	526	661	10		603-04	54 Raudra		..
3706	527	662	11		*604-05	55 Durmati		.
3707	528	663	12		605-06	56 Dundubhi		7 Āśvina
3708	529	664	13		606 07	57 Rudhirōdgārin		..
3709	530	665	14		607-08	58 Rahtāksha		
3710	531	666	15		*608 09	59 Krōdhana		3 Jyēshtha
3711	532	667	16		609-10	60 Kshaya		...
3712	533	668	17		610 11	1 Prabhava		12 Phālguna
3713	534	669	18		611 12	2 Vibhava		...
3714	535	670	19		*612 13	3 Śukla		...
3715	536	671	20		613-14	4 Pramōda		8 Kārttika
3716	537	672	21		614 15	5 Prajāpati		...
3717	538	673	22		615 16	6 Angiras		...
3718	539	674	23		*616-17	7 Srīmukha		5 Śrāvaṇa
3719	540	675	24		617-18	8 Bhāva		...
3720	541	676	25		618-19	9 Yuvan		...

XC.

Brahma-Siddhanta

to Table I, "Indian Calendar."

to the A D. years in col 5, as in Table I, "Indian Calendar "

where differences exist from Sūrya-Siddhānta nomenclature in true solar years

COMMENCEMENT OF THE						Kali
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 FALLS)			
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A D	Week-day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
21 Mar. (80)	0 Sat	5 15 0	3 Mar (62)	3 Tues	133 1013	3701
20 Mar (60)	1 Sun	11 27 9	20 Feb (51)	0 Sat	8 8241	3702
20 Mar (79)	2 Mon	17 39 18	10 Mar (69)	6 Fri	43 5065	3703
20 Mar (79)	3 Tues	23 51 27	28 Feb (59)	4 Wed	257 8614	3704
21 Mar (80)	5 Thur	6 3 36	19 Mar. (78)	3 Tues	292 5437	3705
20 Mar (80)	6 Fri	12 15 45	7 Mar (67)	0 Sat.	168 2666	3706
20 Mar (79)	0 Sat.	18 27 54	24 Feb (55)	4 Wed	43 3394	3707
21 Mar (80)	2 Mon	0 40 3	15 Mar (74)	3 Tues	78 6718	3708
21 Mar (80)	3 Tues	6 52 12	5 Mar (64)	1 Sun	293 0266	3709
20 Mar (80)	4 Wed	13 4 21	22 Feb (53)	5 Thur	168 7494	3710
20 Mar (79)	5 Thur	19 16 30	12 Mar (71)	4 Wed	203 4218	3711
21 Mar (80)	0 Sat.	1 28 39	1 Mar (60)	1 Sun	70 1547	3712
21 Mar (80)	1 Sun	7 40 48	20 Mar. (79)	0 Sat.	113 8371	3713
20 Mar (80)	2 Mon.	13 52 57	9 Mar (69)	5 Thur	328 1918	3714
20 Mar (79)	3 Tues	20 5 6	26 Feb (57)	2 Mon	203 9147	3715
21 Mar. (80)	5 Thur	2 17 15	17 Mar (76)	1 Sun	238 5972	3716
21 Mar (80)	6 Fri	8 29 24	6 Mar (65)	5 Thur	114 3199	3717
20 Mar (80)	0 Sat	14 41 33	24 Feb (55)	3 Tues	328 6747	3718
20 Mar (79)	1 Sun	20 53 42	13 Mar (72)	1 Sun	24 7252	3719
21 Mar (80)	3 Tues	3 5 51	3 Mar (62)	6 Fri	239 0801	3720

					CONCURRENT YEAR			
							JOVIAN SAMVATSARA	Mean intercalated (*adhika*) lunar month
		Chaitra Year	Meshadi solar year in ...	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
			—		619 20	10 Dhātṛi		1 Chaitra
			...		•620 21	11 Iśvara	.	.
			...		621 22	12 Bahudhānya	.	.	10 Pausha
			...		622 23	13 Pramāthin	.	.
			...		623 24	14 Vikrama		.
			...		•624 25	15 Vṛisha		6 Bhādrapada .
			...		625 26	16 Chitrabhānu		...
			...		626 27	17 Subhānu		..
			...		627 28	18 Tārana	.	3 Jyêshtha .
			...		•628 29	19 Pārthiva	.
			3		629 30	20 Vyaya	.	11 Māgha
			...		630 31	21 Sarvajit	.	...
			2		631 32	22 Sarvadharin	.	...
			2...		•632 33	23 Virôdhin	.	8 Kārttika
			...		633 34	24 Vikṛita	.	...
			...		634 35	25 Khara	.
			...		635 36	26 Nandana	.	5 Śrāvaṇa §
			4		... 37	27 Vijaya	.	...
			...		637 38	28 Jaya	.	.
			...		638 39	29 Manmatha	.	1 Chaitra
			...		...	30 Durmukha	.	...
			...		...	31 Hêmalamba	.	10 Pausha
			...		...	32 Vilamba	.
			...		...	33 Vikārin	.
			...		...	34 Śārvarin	.	6 Bhādrapada

XC—contd

COMMENCEMENT OF THE						Kali
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mēshasamkrānti	Day and month, A D	Week day	a (here=t, the index of the $tithi$)	
13	14	17	19	20	23	1
		H M S				
21 Mar (80) .	4 Wed	9 18 0	20 Feb (51)	3 Tues	114 8028	3721
20 Mar (80) .	5 Thur.	15 30 9	10 Mar (70)	2 Mon	149 4852	3722
20 Mar (79)	6 Fri.	21 42 18	27 Feb (58)	6 Fri	25 2081	3723
21 Mar (80)	1 Sun	3 54 27	18 Mar (77)	5 Thur	59 8904	3724
21 Mar (80)	2 Mon	10 6 36	8 Mar (67)	3 Tues	274 2453	3725
20 Mar (80)	3 Tues	16 18 45	25 Feb (56)	0 Sat.	149 9682	3726
20 Mar (79)	4 Wed	22 30 54	15 Mar (74)	6 Fri	184 6506	3727
21 Mar (80)	6 Fri	4 43 3	4 Mar (63)	3 Tues	60 3734	3728
21 Mar (80)	0 Sat	10 55 12	22 Feb (53) .	1 Sun	274 7282	3729
20 Mar (80)	1 Sun	17 7 21	12 Mar (72)	0 Sat.	309 4106	3730
20 Mar (79)	2 Mon	23 19 30	1 Mar (60)	4 Wed.	185 1334	3731
21 Mar (80)	4 Wed	5 31 39	20 Mar (79)	3 Tues	219 8158	3732
21 Mar. (80)	5 Thur	11 43 48	9 Mar (68)	0 Sat	95 5387	3733
20 Mar (80) .	6 Fri.	17 55 57	27 Feb (58)	5 Thur	309 8935	3734
21 Mar (80)	1 Sun. .	0 8 6	16 Mar (75)	3 Tues	5 9439	3735
21 Mar. (80)	2 Mon	6 20 15	6 Mar (65)	1 Sun	220 2987	3736
21 Mar, (80) .	3 Tues	12 32 24	23 Feb (54)	5 Thur	96 0216	3737
20 Mar. (80) .	4 Wed	18 44 33	13 Mar (73)	4 Wed	130 7040	3738
21 Mar (80) . .	6 Fri	0 56 42	2 Mar (61)	1 Sun	6 4268	3739
21 Mar (80)	0 Sat .	7 8 51	20 Feb (51)	6 Fri	220 7816	3740
21 Mar (80)	1 Sun	13 21 0	11 Mar (70)	5 Thur .	255 4640	3741
20 Mar (80)	2 Mon	19 33 9	28 Feb. (59)	2 Mon	131 1868	3742
21 Mar. (80)	4 Wed	1 45 18	18 Mar (77)	1 Sun	165 8692	3743
21 Mar (80)	5 Thur	7 57 27	7 Mar (66)	5 Thur .	41 5921	3744
21 Mar (80) . .	6 Fri .	14 9 36	25 Feb (56) .	3 Tues	255 9470	3745

TABLE

CONCURRENT YEAR						JOVIAN SAMVATSARA.		Mean intercalated (*adhika*) lunar month
Kali	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	8a	4	5	6	7	8a
3746	567	702	51		*644 45	35 Plava		.
3747	568	703	52		645 46	36 Śubhakṛit		...
3748	569	704	53		646-47	37 Śōbhana		3 Jyīshtha .
3749	570	705	54		647-48	38 Krōdhin		. .
3750	571	706	55		*648 49	39 Visvāvasu †		11 Māgha .
3751	572	707	56		649 50	41 *Plavanga*		. .
3752	573	708	57		650 51	42 *Kīlaka*		. .
3753	574	709	58		651-52	43 *Saumya*		8 Kārttika .
3754	575	710	59		*652-53	44 *Sādhārana*		...
3755	576	711	60		653-54	45 *Virōdhakṛit*		...
3756	577	712	61		654 55	46 Paridhāvin		4 Āshādha .
3757	578	713	62		655 56	47 Pramādin		...
3758	579	714	63		*656 57	48 Ānanda		. .
3759	580	715	64		657-58	49 Rākshasa		1 Chaitra .
3760	581	716	65		658 59	50 Anala		...
3761	582	717	66		659 60	51 Pingala		9 Mārgaśira .
3762	583	718	67		*660 61	52 Kālayukta		.
3763	584	719	68		661-62	53 Siddhārthin		
3764	585	720	69		662 63	54 Raudra		6 Bhādrapada
3765	586	721	70		663 64	55 Durmati		
3766	587	722	71		*664 65	56 Dandubhi		...
3767	588	723	72		665-66	57 Rudhirōdgārin		2 Vaiśākha
3768	589	724	73		666 67	58 Raktaksha		. .
3769	590	725	74		667-68	59 Krōdhana		11 Māgha
3770	591	726	75		*668-69	60 Kshaya	.	...

† 40 Parābhava was suppressed, both in mean and true reckoning

XC—*contd*

COMMENCEMENT OF THE							Kali
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)				
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week-day	a (here $= t$, the index of the *tithi*)		
13	14	17	19	20	23		1
		H　M　S					
20 Mar (80)	0 Sat.	20　21　45	15 Mar (75)	2 Mon	290 6293		3746
21 Mar (80)	2 Mon	2　33　54	4 Mar (63)	6 Fri	166 3522		3747
21 Mar (80)	3 Tues	8　46　3	21 Feb (52)	3 Tues	42 0750		3748
21 Mar (80)	4 Wed	14　58　12	12 Mar (71)	2 Mon	76 7573		3749
20 Mar (80)	5 Thur	21　10　21	1 Mar (61)	0 Sat	291 1122		3750
21 Mar (80) .	0 Sat.	3　22　30	20 Mar (79)	6 Fri	325 7946		3751
21 Mar (80)	1 Sun	9　34　39	9 Mar (68)	3 Tues	201 5175		3752
21 Mar (80) .	2 Mon	15　46　48	26 Feb (57)	0 Sat	77 2402		3753
20 Mar (80) .	3 Tues	21　58　57	16 Mar (76)	0 Sat.	111 9227		3754
21 Mar (80) .	5 Thur	4　11　6	6 Mar (65)	4 Wed	326 2775		3755
21 Mar (80)	6 Fri	10　23　15	23 Feb (54)	1 Sun	202 0003		3756
21 Mar (80) .	0 Sat.	16　35　24	14 Mar (73)	0 Sat.	236 6827		3757
20 Mar (80)	1 Sun	22　47　33	2 Mar (62)	4 Wed	112 4056		3758
21 Mar (80)	3 Tues	4　59　42	20 Feb (51)	2 Mon	326 7604		3759
21 Mar (80) . .	4 Wed	11　11　51	10 Mar (69)	0 Sat.	22 8108		3760
21 Mar (80) .	5 Thur	17　24　0	28 Feb (59)	5 Thur	237 1656		3761
20 Mar (80) . .	6 Fri.	23　36　9	18 Mar (78)	4 Wed	271 8440		3762
21 Mar (80)	1 Sun	5　48　18	7 Mar (66)	1 Sun	147 5708		3763
21 Mar (80) .	2 Mon	12　0　27	24 Feb (55)	5 Thur	23 2937		3764
21 Mar (80)	3 Tu s	18　12　36	15 Mar (74)	4 Wed	57 9761		3765
21 Mar (81) .	5 Thur	0　24　45	4 Mar (64)	2 Mon	272 3310		3766
21 Mar (80) .	6 Fri	6　36　54	21 Feb (52)	6 Fri	148 0537		3767
21 Mar (80)	0 Sat.	12　49　3	12 Mar (71)	5 Thur	182 7361		3768
21 Mar (80) .	1 Sun .	19　1　12	1 Mar (60)	2 Mon	58 4590		3769
21 Mar (81)	3 Tues	1　13　21	19 Mar (79)	1 Sun	93 1413		3770

TABLE

CONCURRENT YEAR								Mean intercalated (*adhika*) lunar month
Kalı	Śaka	Chaitrādı Vikrama	Mēshādı solar year in Bengal	Kollam	A.D	JOVIAN SAMVATSABA		
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3771	592	727	76		669-70	1 Prabhava		
3772	593	728	77		670-71	2 Vibhava		7 Āśvina
3773	594	729	78		671-72	3 Sukla		
3774	595	730	79		*672-73	4 Pramōda		..
3775	596	731	80		673-74	5 Prajāpatı		4 Āshādha
3776	597	732	81		674-75	6 Angiras		...
3777	598	733	82		675-76	7 Śrīmukha		
3778	599	734	83		*676-77	8 Bhāva		1 Chaitra
3779	600	735	84		677-78	9 Yuvan		...
3780	601	736	85		678-79	10 Dhātrı		9 Mārgaśıra
3781	602	737	86		679-80	11 Īśvara		...
3782	603	738	87		*680-81	12 Bahudhānya		.
3783	604	739	88		681-82	13 Pramāthın		6 Bhādrapada
3784	605	740	89		682-83	14 Vikrama		...
3785	606	741	90		683-84	15 Vrısha		...
3786	607	742	91		*684-85	16 Chitrabhānu		2 Vaiśākha
3787	608	743	92		685-86	17 Subhānu		.
3788	609	744	93		686-87	18 Tārana		11 Māgha
3789	610	745	94		687-88	19 Pārthıva		...
3790	611	746	95		*688-89	20 Vyaya		
3791	612	747	96		689-90	21 Sarvajıt		7 Āśvina
3792	613	748	97		690-91	22 Sarvadhārın		...
3793	614	749	98		691-92	23 Vırōdhın		
3794	615	750	99		*692-93	24 Vıkrıta		4 Āshādha
3795	616	751	100		693-94	25 Khara		...

XC—contd

COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D.	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A.D	Week-day	a (here$=t$, the index of the $tithi$)	
13	14	17	19	20	23	1
		H M S				
21 Mar (80)	4 Wed	7 25 30	9 Mar (68)	6 Fri	307 4962	3771
21 Mar (80)	5 Thur	13 37 39	26 Feb (57)	3 Tues	183 2190	3772
21 Mar (80) .	6 Fri	19 49 48	17 Mar (76)	2 Mon	217 9015	3773
21 Mar (81) .	1 Sun	2 1 57	5 Mar (65)	6 Fri .	93 6242	3774
21 Mar (80) .	2 Mon	8 14 6	23 Feb (54)	4 Wed	307 9791	3775
21 Mar (80)	3 Tues	14 26 15	13 Mar (72)	2 Mon	4 0295	3776
21 Mar (80)	4 Wed.	20 38 24	3 Mar (62)	0 Sat	218 3843	3777
21 Mar (81)	6 Fri	2 50 33	20 Feb (51)	4 Wed.	94 1071	3778
21 Mar (80)	0 Sat.	9 2 42	10 Mar (69)	3 Tues .	128 7896	3779
21 Mar (80)	1 Sun	15 14 51	27 Feb (58)	0 Sat.	4 5124	3780
21 Mar. (80)	2 Mon	21 27 0	18 Mar (77)	6 Fri .	39 1947	3781
21 Mar (81) .	4 Wed	3 39 9	7 Mar (67)	4 Wed .	253 5496	3782
21 Mar (80)	5 Thur	9 51 18	24 Feb (55)	1 Sun .	129 2725	3783
21 Mar. (80)	6 Fri	16 3 27	15 Mar (74)	0 Sat .	163 9549	3784
21 Mar (80) .	0 Sat. .	22 15 36	4 Mar. (63)	4 Wed .	39 6776	3785
21 Mar (81)	2 Mon	4 27 45	22 Feb. (53)	2 Mon	254 0325	3786
21 Mar (80)	3 Tues	10 39 54	12 Mar (71)	1 Sun	288 7149	3787
21 Mar (80)	4 Wed	16 52 3	1 Mar (60)	5 Thur	164 4377	3788
21 Mar (80) .	5 Thur	23 4 12	20 Mar (79)	4 Wed	199 1200	3789
21 Mar (81)	0 Sat.	5 16 21	8 Mar (68)	1 Sun	74-8430	3790
21 Mar (80)	1 Sun .	11 28 30	26 Feb (57)	6 Fri	289 1978	3791
21 Mar. (80)	2 Mon .	17 40 39	17 Mar (76)	5 Thur	328 8802	3792
21 Mar. (80)	3 Tues .	23 52 48	6 Mar (65)	2 Mon	199 6080	3793
21 Mar (81)	5 Thur	6 4 57	23 Feb. (54)	6 Fri	75 3259	3794
21 Mar. (80) .	6 Fri.	12 17 6	13 Mar (72)	5 Thur.	110 0082	3795

TABLE

CONCURRENT YEAR						JOVIAN SAMVATSARA.		Mean intercalated (*adhika*) lunar month
Kali.	Saka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A D.	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3796	617	752	101		694-95	26 Nandana	.	12 Phālguna
3797	618	753	102		695-96	27 Vijaya	.	
3798	619	754	103		*695-97	28 Jaya	.	
3799	620	755	104		697-98	29 Manmatha		9 Mārgaśira
3800	621	756	105		698-99	30 Durmukha		
3801	622	757	106		699 700	31 Hēmalamba	.	.
3802	623	758	107		*700 01	32 Vilamba	. .	5 Śrāvana .
3803	624	759	108		701 02	33 Vikārin	. .	. .
3804	625	760	109		702-03	34 Śārvarin	.	.
3805	626	761	110		703 04	35 Plava	.	2 Vaiśākha .
3806	627	762	111		*704-05	36 Śubhakṛt	.	
3807	628	763	112		705 06	37 Śōbhana	.	10 Pausha .
3808	629	764	113		706-07	38 Krōdhin	.	.
3809	630	765	114		707-08	39 Viśvāvasu		..
3810	631	766	115		*708-09	40 Parābhava	.	7 Aśvina
3811	632	767	116		709-10	41 Plavanga		...
3812	633	768	117		710-11	42 Kīlaka	.	..
3813	634	769	118		711-12	43 Saumya	.	. 4 Ashādha .
3814	635	770	119		*712-13	44 Sādhārana	. .	...
3815	636	771	120		713-14	45 Virōdhakṛt	.	12 Phalguna .
3816	637	772	121		714-15	46 Paridhāvin .	.	. .
3817	638	773	122		715-16	47 Pramādin	. .	..
3818	639	774	123		*716-17	48 Ānanda	. .	. 9 Mārgaśira .
3819	640	775	124		717-18	49 Rākshasa	. .	...
3820	641	776	125		718-19	50 Anala	. .	. .

XC—contd

COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D.	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week-day.	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M. S.				
21 Mar. (80)	0 Sat.	18 29 15	3 Mar. (62)	3 Tues	324 8031	3796
22 Mar (81)	2 Mon.	0 41 24	21 Mar. (80)	1 Sun	20 4135	3797
21 Mar (81)	3 Tues	6 53 33	10 Mar. (70)	6 Fri	234·7683	3798
21 Mar (80)	4 Wed.	13 5 42	27 Feb. (58)	3 Tues	110 4911	3799
21 Mar (80)	5 Thur	19 17 51	18 Mar (77)	2 Mon	145 1735	3800
22 Mar (81)	0 Sat.	1 30 0	7 Mar (66)	0 Fri.	20 8963	3801
21 Mar (81)	1 Sun	7 42 9	25 Feb (56)	4 Wed.	235 2512	3802
21 Mar (80)	2 Mon	13 54 18	15 Mar. (74)	3 Tues	269 9886	3803
21 Mar (80)	3 Tues	20 6 27	4 Mar. (63)	0 Sat	145 6564	3804
22 Mar. (81)	5 Thur	2 18 36	21 Feb (52)	4 Wed.	21 8792	3805
21 Mar. (81)	6 Fri.	8 30 45	11 Mar (71)	3 Tues	56 0616	3806
21 Mar (80)	0 Sat	14 42 54	1 Mar. (60)	1 Sun.	270 4164	3807
21 Mar. (80)	1 Sun	20 55 8	20 Mar (79)	0 Sat.	305 0988	3808
22 Mar (81)	3 Tues.	3 7 12	9 Mar (68)	4 Wed	180 8217	3809
21 Mar. (81)	4 Wed	9 19 21	26 Feb (57)	1 Sun	56 5444	3810
21 Mar. (80)	5 Thur.	15 31 30	16 Mar (75)	0 Sat.	91 2269	3811
21 Mar. (80)	6 Fri.	21 43 39	6 Mar (65)	5 Thur.	305 5817	3812
22 Mar (81)	1 Sun	3 55 48	23 Feb (54)	2 Mon	181 3046	3813
21 Mar (81)	2 Mon	10 7 57	13 Mar (73)	1 Sun	215·9869	3814
21 Mar (80)	3 Tues	16 20 6	2 Mar (61)	5 Thur.	91 7098	3815
21 Mar. (80)	4 Wed	22 32 15	21 Mar (80)	4 Wed	126 3922	3816
22 Mar (81)	6 Fri.	4 44 24	10 Mar (69)	1 Sun	2 1150	3817
21 Mar. (81)	0 Sat.	10 56 33	28 Feb (59)	6 Fri	216 4698	3818
21 Mar. (80)	1 Sun	17 8 42	18 Mar (77)	5 Thur	251 1632	3819
21 Mar. (80)	2 Mon	23 20 51	Mar (66)	2 Mon	126·8751	3820

TABLE

			CONCURRENT YEAR.					Mean intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D.	Jovian Samvatsara.		
						Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
3821	642	777	126		719-20	51 Pingala		5 Śrāvana
3822	643	778	127		*720-21	52 Kālayukta		...
3823	644	779	128		721-22	53 Siddhārthin		
3824	645	780	129		722-23	54 Raudra		2 Vaisākha
3825	646	781	130		723-24	55 Durmati		..
3826	647	782	131		*724-25	56 Dundubhi		10 Pausha
3827	648	783	132		725-26	57 Rudhirōdgārin		...
3828	649	784	133		726-27	58 Raktāksha		...
3829	650	785	134		727-28	59 Krōdhana		7 Āśvina
3830	651	786	135		*728-29	60 Kshaya		...
3831	652	787	136		729-30	1 Prabhava		
3832	653	788	137		730-31	2 Vibhava		3 Jyēshtha
3833	654	789	138		731-32	3 Śukla		
3834	655	790	139		*732-33	4 Pramōda		12 Phālguna
3835	656	791	140		733-34	5 Prajāpati†		...
3836	657	792	141		734-35	7 *Śrīmukha*		
3837	658	793	142		735-36	8 *Bhāva*		8 Kārttika
3838	659	794	143		*736-37	9 *Yuvan*		
3839	660	795	144		737-38	10 *Dhātri*		
3840	661	796	145		738-39	11 *Īśvara*		5 Śrāvana
3841	662	797	146		739-40	12 Bahudhānya		
3842	663	798	147		*740-41	13 Pramāthin		
3843	664	799	148		741-42	14 Vikrama		1 Chaitra
3844	665	800	149		742-43	15 Vrisha		
3845	666	801	150		743-44	16 Chitrabhānu		10 Pausha

† No 6 Angiras was suppressed according to the mean system By the *Brahma-Siddhānta* 'true' system K.Y. 3836, A.D. 734-735, was called Angiras, 7 Srimukha being suppressed. K.Y. 3837, A.D. 735-36, was 8 Bhāva by both systems.

XC—contd

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A.D.	Week-day	Time of mean Mēsha-samkrānti.	Day and month, A D	Week-day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81)	4 Wed.	5 33 0	24 Feb (55)	6 Fri	2·5979	3821
21 Mar (81)	5 Thur	11 45 9	14 Mar (74)	5 Thur	37 2803	3822
21 Mar (80)	6 Fri	17 57 18	4 Mar (63)	3 Tues	251 6352	3823
22 Mar (81)	1 Sun	0 9 27	21 Feb (52)	0 Sat	127 3579	3824
22 Mar (81)	2 Mon	6 21 36	12 Mar (71)	6 Fri	162 0403	3825
21 Mar (81)	3 Tues	12 33 45	29 Feb, (60)	3 Tues	37 7632	3826
21 Mar (80)	4 Wed	18 45 54	19 Mar (78)	2 Mon	72 4457	3827
22 Mar (81)	6 Fri	0 58 3	9 Mar (68)	0 Sat.	286 8004	3828
22 Mar (81)	0 Sat.	7 10 12	26 Feb (57)	4 Wed	162 5233	3829
21 Mar (81)	1 Sun	13 22 21	16 Mar (76)	3 Tues	197 2057	3830
21 Mar (80)	2 Mon	19 34 30	5 Mar (64)	0 Sat.	72 9284	3831
22 Mar (81)	4 Wed	1 46 39	23 Feb (54)	5 Thur	287 2833	3832
22 Mar (81)	5 Thur	7 58 48	14 Mar (73)	4 Wed	321 9657	3833
21 Mar (81)	6 Fri	14 10 57	2 Mar (62)	1 Sun	197 6886	3834
21 Mar (80)	0 Sat.	20 23 6	21 Mar (80)	0 Sat	232 3709	3835
22 Mar (81)	2 Mon.	2 35 15	10 Mar. (69)	4 Wed	108 0938	3836
22 Mar (81)	3 Tues.	8 47 24	28 Feb (59)	2 Mon	322 4486	3837
21 Mar (81)	4 Wed.	14 59 33	17 Mar (77)	0 Sat	18 4990	3838
21 Mar (80)	5 Thur	21 11 42	7 Mar (66)	5 Thur	232 8538	3839
22 Mar (81)	0 Sat	3 23 51	24 Feb (55)	2 Mon	108 5767	3840
22 Mar (81)	1 Sun	9 36 0	15 Mar. (74)	1 Sun	143 2591	3841
21 Mar (81)	2 Mon	15 48 9	3 Mar. (63)	5 Thur	18 9819	3842
21 Mar (80)	3 Tues	22 0 18	21 Feb. (52)	3 Tues.	233 3367	3843
22 Mar (81)	5 Thur	4 12 27	12 Mar (71)	2 Mon.	268·0191	3844
22 Mar (81)	6 Fri	10 24 36	1 Mar (60)	6 Fri	143 7420	3845

TABLE

						Jovian Samvatsara		Mean Intercalated (adhika) lunar month
						Southern system.	Northern system.	
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D.			
1	2	3	3a	4	5	6	7	8a
3846	667	802	151		*744-45	17 Subhānu		
3847	668	803	152		745 46	18 Tārana		..
3848	669	804	153		746-47	19 Pārthiva		6 Bhādrapada.
3849	670	805	154		747-48	20 Vyaya		
3850	671	806	155		*748 49	21 Sarvajit		
3851	672	807	156		749-50	22 Sarvadhārin		8 Jyaishtha
3852	673	808	157		750-51	23 Virōdhin		
3853	674	809	158		751-52	24 Vikrita		12 Phālguna
3854	675	810	159		*752-53	25 Khara		...
3855	676	811	160		753 54	26 Nandana		
3856	677	812	161		754 55	27 Vijaya		8 Kārttika
3857	678	813	162		755 56	28 Jaya		
3858	679	814	163		*756-57	29 Manmatha		.
3859	680	815	164		757-58	30 Durmukha		..
3860	681	816	165		758-59	31 Hēmalamba		5 Srāvana
3861	682	817	166		759-60	32 Vilamba		..
3862	683	818	167		*760 61	33 Vikārin		...
3863	684	819	168		761-62	34 Sārvarin		1 Chaitra
3864	685	820	169		762-63	35 Plava		...
3865	686	821	170		763 64	36 Subhakrit		10 Pausha
3866	687	822	171		*764-65	37 Śōbhana		..
3867	688	823	172		765-66	38 Krōdhin		...
3868	689	824	173		766-67	39 Viśvāvasu		6 Bhādrapada
3869	690	825	174		767-68	40 Parābhava		...
3870	691	826	175		*768 69	41 Plavanga		3 Jyēshtha

XC—*contd*

COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mêsha-samkrānti	Day and month, A. D.	Week-day	a (here $=t$, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M. S.				
21 Mar (81)	0 Sat.	16 36 45	19 Mar (79)	5 Thur	178 4243	3846
21 Mar (80)	1 Sun	22 48 54	8 Mar (67)	2 Mon	54 1472	3847
22 Mar (81)	3 Tues	5 1 3	26 Feb (57)	0 Sat.	268 5021	3848
22 Mar (81)	4 Wed	11 13 12	17 Mar (76)	6 Fri	303 1844	3849
21 Mar (81)	5 Thur	17 25 21	5 Mar (65)	3 Tues	178 9072	3850
21 Mar (80)	6 Fri.	23 37 30	22 Feb (53)	0 Sat.	54 6301	3851
22 Mar (81)	1 Sun	5 49 39	13 Mar (72)	6 Fri	89 3125	3852
22 Mar (81)	2 Mon	12 1 48	3 Mar (62)	4 Wed	303 6673	3853
21 Mar (81)	3 Tues	18 13 57	20 Mar. (80)	2 Mon	9999·7177§	3854
22 Mar (81)	5 Thur	0 26 6	10 Mar (69)	0 Sat	214 0726	3855
22 Mar (81)	6 Fri	6 38 15	27 Feb (58)	4 Wed	89 7958	3856
22 Mar (81)	0 Sat	12 50 24	18 Mar (77)	3 Tues	124 4778	3857
21 Mar (81)	1 Sun	19 2 33	6 Mar (66)	0 Sat.	0 2006	3858
22 Mar (81)	3 Tues	1 14 42	24 Feb (55)	5 Thur	214 5555	3859
22 Mar (81)	4 Wed	7 26 51	15 Mar (74)	4 Wed	249 2378	3860
22 Mar (81)	5 Thur	13 39 0	4 Mar (63)	1 Sun	124 9607	3861
21 Mar (81)	6 Fri	19 51 9	21 Feb (52)	5 Thur	0 6835	3862
22 Mar (81)	1 Sun.	2 3 18	11 Mar (70)	4 Wed	35 3658	3863
22 Mar (81)	2 Mon	8 15 27	1 Mar (60)	2 Mon	249·7207	3864
22 Mar (81)	3 Tues	14 27 36	20 Mar (79)	1 Sun.	284 4031	3865
21 Mar (81)	4 Wed	20 39 45	8 Mar (68)	5 Thur	160 1261	3866
22 Mar (81)	6 Fri	2 51 54	25 Feb (56)	2 Mon	35 8488	3867
22 Mar (81)	0 Sat.	9 4 3	16 Mar. (75)	1 Sun	70 5312	3868
22 Mar (81)	1 Sun	15 16 12	6 Mar (65)	6 Fri	284 8860	3869
21 Mar (81)	2 Mon.	21 28 21	23 Feb (54)	3 Tues.	160 6088	3870

§Chaitra *śukla* 1 was suppressed.

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TABLE

						CONCURRENT YEAR.		
Kalı	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A.D	JOVIAN SAMVATSARA		Mean intercalated (adhik) lunar month
						Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3871	692	827	176		769 70	42 Kilaka		...
3872	693	828	177		770-71	43 Saumya		11 Māgha
3873	694	829	178		771-72	44 Sādhārana		
3874	695	830	179		*772-73	45 Virōdhakrit		.
3875	696	831	180		773 74	46 Paridhāvin		.
3876	697	832	181		774-75	47 Pramādin		8 Kārttika .
3877	698	833	182		775-76	48 Ānanda .	.	
3878	699	834	183		*776-77	49 Rākshasa	.	4 Āshādha .
3879	700	835	184		777-78	50 Anala		
3880	701	836	185		778 79	51 Pingala		.
3881	702	837	186		779-80	52 Kālayukta		1 Chaitra .
3882	703	838	187		*780 81	53 Siddhārthin .	.	
3883	704	839	188		781-82	54 Raudra		9 Mārgaśīra .
3884	705	840	189		782 83	55 Durmati .		
3885	706	841	190		783-84	56 Dundubhi		
3886	707	842	191		*784 85	57 Rudhirōdgārin	.	6 Bhādrapada .
3887	708	843	192		785 86	58 Raktāksha		. .
3888	709	844	193		786 87	59 Krōdhana		
3889	710	845	194		787-88	60 Kshaya .		3 Jyēshtha .
3890	711	846	195		*788 89	1 Prabhava		.
3891	712	847	196		789 90	2 Vibhava		11 Māgha
3892	713	848	197		790-91	3 Śukla	.	...
3893	714	849	198		791-92	4 Pramōda		...
3894	715	850	199		*792 93	5 Prajāpati	.	8 Kārttika .
3895	716	851	200		793-94	6 Angiras	.	

XC—contd

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A D	Week-day	Time of mean Mesha-samkranti	Day and month, A D	Week day	a (here=t, the index of the $tithi$)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81)	4 Wed	3 40 30	13 Mar (72) .	2 Mon .	195 2912	3871
22 Mar (81)	5 Thur	9 52 39	2 Mai (61) .	6 Fri .	71 0141	3872
22 Mar (81)	6 Fri	16 4 48	21 Mar. (80) .	5 Thur	105 6965	3873
21 Mar (81)	0 Sat	22 16 57	10 Mar (70) .	3 Tues	320 0513	3874
22 Mar (81)	2 Mon	4 29 6	27 Feb (58)	0 Sat .	195 7741	3875
22 Mar (81)	3 Tues	10 41 15	18 Mar (77)	6 Fri .	230 4566	3876
22 Mar (81)	4 Wed.	16 53 24	7 Mar (66)	3 Tues	106 1793	3877
21 Mar (81)	5 Thur	23 5 33	25 Feb (56)	1 Sun	320 5342	3878
22 Mar (81)	0 Sat	5 17 42	14 Mar (73)	6 Fri .	16 5846	3879
22 Mar (81)	1 Sun	11 29 51	4 Mar (63)	4 Wed .	280 9895	3880
22 Mar (81)	2 Mon	17 42 0	21 Feb (52)	1 Sun .	106 6622	3881
21 Mar (81)	3 Tues	23 54 9	11 Mar (71) .	0 Sat	141 3446	3882
22 Mar (81)	5 Thur	6 6 18	28 Feb (59)	4 Wed .	17 0675	3883
22 Mar (81)	6 Fri	12 18 27	19 Mai (78) .	3 Tues	51·7499	3884
22 Mar (81)	0 Sat	18 30 36	9 Mar (68) .	1 Sun .	266 1047	3885
22 Mar (82)	2 Mon	0 42 45	26 Feb (57)	5 Thur.	141 8276	3886
22 Mar (81)	3 Tues	6 54 54	16 Mar (75)	4 Wed	176 5100	3887
22 Mar (81)	4 Wed	13 7 3	5 Mar (64) .	1 Sun .	52 2327	3888
22 Mar (81)	5 Thur	19 19 12	23 Feb (54)	6 Fri .	266 5876	3889
22 Mai (82)	0 Sat	1 31 21	13 Mar (73) .	5 Thur	301·2700	3890
22 Mar (81)	1 Sun	7 43 30	2 Mar (61) .	2 Mon .	176 9929	3891
22 Mar (81) .	2 Mon	13 55 39	21 Mar (80) .	1 Sun	211 6752	3892
22 Mar (81)	3 Tues	20 7 48	10 Mar (69)	5 Thur. .	87 3981	3893
22 Mar (82)	5 Thur	2 19 57	28 Feb (59) .	3 Tues	301 7530	3894
22 Mar (81)	6 Fri .	8 32 6	17 Mar (76) .	1 Sun .	9997 8033 §	3895

§ Chaitra śukla 1 was suppressed.

CONCURRENT YEAR.						JOVIAN SAMVATSARA		Mean intercalated (*adhika*) lunar month
Kali	Śaka	Chaitrādi Vikrama.	Māshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3896	717	852	201		794-95	7 Śrīmukha		...
3897	718	853	202		795-96	8 Bhāva		4 Āshādha
3898	719	854	203		*796-97	9 Yuvan		...
3899	720	855	204		797-98	10 Dhātṛi		...
3900	721	856	205		798-99	11 Īśvara		1 Chaitra
3901	722	857	206		799-800	12 Bahudhānya		
3902	723	858	207		*800-01	13 Pramāthin		9 Mārgaśira
3903	724	859	208		801-02	14 Vikrama		
3904	725	860	209		802-03	15 Vṛisha		..
3905	726	861	210		803-04	16 Chitrabhānu		6 Bhādrapada
3906	727	862	211		*804-05	17 Subhānu		...
3907	728	863	212		805-06	18 Tārana		...
3908	729	864	213		806-07	19 Pārthiva		2 Vaiśākha
3909	730	865	214		807-08	20 Vyaya		
3910	731	866	215		*808-09	21 Sarvajit		11 Māgha
3911	732	867	216		809-10	22 Sarvadhārin		
3912	733	868	217		810-11	23 Virōdhin		
3913	734	869	218		811-12	24 Vikṛita		7 Āśvina
3914	735	870	219		*812-13	25 Khara		..
3915	736	871	220		813-14	26 Nandana		...
3916	737	872	221		814-15	27 Vijaya		4 Āshādha
3917	738	873	222		815-16	28 Jaya		
3918	739	874	223		*816-17	29 Manmatha		12 Phālguna
3919	740	875	224		817-18	30 Durmukha		...
3920	741	876	225		818-19	31 Hēmalamba†		...

† 22 Vilamba was suppressed by mean reckoning. By *Brahma-Siddhānta* "true" reckoning the year
K Y 3921, A.D 819-20, was 32 "Vilamba," and 33 Vikārin was suppressed.

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COMMENCEMENT OF THE						Kali
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D.	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A.D.	Week day	a (here $= t$, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81) . .	0 Sat	14 44 15	7 Mar (66)	6 Fri	212 1581	3896
22 Mar. (81) .	1 Sun	20 56 24	24 Feb (55) .	3 Tues	87 8810	3897
22 Mar (82) .	3 Tues.	3 8 33	14 Mar (74) .	2 Mon	122 5683	3898
22 Mar (81)	4 Wed .	9 20 42	3 Mar (62)	6 Fri .	9998 2862§	3899
22 Mar (81)	5 Thur.	15 32 51	21 Feb (52)	4 Wed	212 6410	3900
22 Mar (81)	6 Fri	21 45 0	12 Mar (71) .	3 Tues	247 3234	3901
22 Mar (82)	1 Sun	3 57 9	29 Feb (60) .	0 Sat	123 0463	3902
22 Mar (81)	2 Mon	10 9 18	19 Mar (78)	6 Fri	157 7287	3903
22 Mar (81)	3 Tues.	16 21 27	8 Mar (67) .	3 Tues. .	33 4515	3904
22 Mar (81)	4 Wed .	22 33 36	26 Feb (57)	1 Sun	247 8064	3905
22 Mar (82) .	6 Fri .	4 45 45	16 Mar (76)	0 Sat	282 4888	3906
22 Mar (81)	0 Sat.	10 57 54	5 Mar (64)	4 Wed	158 2115	3907
22 Mar (81) .	1 Sun .	17 10 3	22 Feb (53) .	1 Sun	33 9344	3908
22 Mar (81)	2 Mon	23 22 12	13 Mar (72) .	0 Sat .	68 6168	3909
22 Mar (82)	4 Wed	5 34 21	2 Mar (62)	5 Thur .	282 9716	3910
22 Mar (81)	5 Thur	11 46 30	21 Mar (80)	4 Wed	317 6540	3911
22 Mar (81) . .	6 Fri	17 58 39	10 Mar (69)	1 Sun	193 3769	3912
23 Mar (82) . .	1 Sun	0 10 48	27 Feb (58)	5 Thur	69·0998	3913
22 Mar (82) .	2 Mon	6 22 57	17 Mar (77) .	4 Wed	103 7821	3914
22 Mar. (81)	3 Tues	12 35 6	7 Mar (66) .	2 Mon	318 1369	3915
22 Mar (81)	4 Wed	18 47 15	24 Feb (55) .	6 Fri .	193 8598	3916
23 Mar (82)	6 Fri	0 59 24	15 Mar (74) .	5 Thur	228 5421	3917
22 Mar (82) .	0 Sat .	7 11 33	3 Mar (63) .	2 Mon .	104 2650	3918
22 Mar (81) .	1 Sun .	13 23 42	22 Mar (81)	1 Sun	138 9474	3919
22 Mar. (81)	2 Mon .	19 35 51	11 Mar (70) .	5 Thur .	14 6703	3920

§ Chaitra *śukla* 1 was suppressed

						Jovian Samvatsara		Mean intercalated (*adhika*) lunar month
				CONCURRENT YEAR				
Kali	Saka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3921	742	877	226		819-20	33 *Vikārin*	.	9 Mārgasira
3922	743	878	227		*820 21	34 *Sārvarin*	.	
3923	744	879	228		821-22	35 *Plava*		
3924	745	880	229		822-23	36 *Śubhakrit* .		6 Bhādrapada‡
3925	746	881	230		823 24	37 *Śōbhana*		
3926	747	882	231		*824 25	38 Krōdhin		.
3927	748	883	232	0-1	825 26	39 Viśvāvasu	.	2 Vaisākha
3928	749	884	233	1-2	826-27	40 Parābhava	.	.
3929	750	885	234	2 3	827-28	41 Plavanga	.	11 Māgha
3930	751	886	235	3-4	*828-29	42 Kīlaka	.	
3931	752	887	236	4-5	829-30	43 Saumya		.
3932	753	888	237	5 6	830 31	44 Sādhārana .	.	7 Āśvina
3933	754	889	238	6-7	831-32	45 Virōdhakrit	.	
3934	755	890	239	7-8	*832-33	46 Paridhāvin		
3935	756	891	240	8 9	833 34	47 Pramādin '	.	4 Āshādha
3936	757	892	241	9 10	834 35	48 Ānanda	.	
3937	758	893	242	10 11	835 36	49 Rākshasa		12 Phālguna
3938	759	894	243	11-12	*836 37	50 Anala	.	..
3939	760	895	244	12-13	837-38	51 Pingala	.	
3940	761	896	245	13 14	838 39	52 Kālayukta	.	9 Mārgaśira
3941	762	897	246	14-15	839 40	53 Siddhārthin	.	
3942	763	898	247	15-16	*840 41	54 Raudra		
3943	764	899	248	16-17	841 42	55 Durmati		5 Srāvana
3944	765	900	249	17-18	842-43	56 Dundubhi .		.
3945	766	901	250	18 19	843-44	57 Rudhirōdgārin		.

‡ See " Remarks," p 215 above.

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COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week-day	a (here = t, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	4 Wed.	1 48 0	1 Mar (60)	3 Tues	229 0250	3921
22 Mar (82)	5 Thur	8 0 9	19 Mar (79)	2 Mon	263 7074	3922
22 Mar (81)	6 Fri	14 12 18	8 Mar (67)	6 Fri	139 4313	3923
22 Mar (81)	0 Sat	20 24 27	25 Feb (56)	3 Tues	15 1531	3924
23 Mar (82)	2 Mon	2 36 36	16 Mar (75)	2 Mon	49 8855	3925
22 Mar (82)	3 Tues	8 48 45	5 Mar (65)	0 Sat	264 1904	3926
22 Mar (81)	4 Wed	15 0 54	22 Feb (53)	4 Wed	139 9182	3927
22 Mar (81)	5 Thur	21 13 3	13 Mar (72)	3 Tues	174 5955	3928
23 Mar (82)	0 Sat.	3 25 12	2 Mar (61)	0 Sat.	50 3184	3929
22 Mar (82)	1 Sun	9 37 21	20 Mar (80)	6 Fri	85 0009	3930
22 Mar (81)	2 Mon	15 49 30	10 Mar (69)	4 Wed	299 3556	3931
22 Mar (81)	3 Tues	22 1 39	27 Feb (58)	1 Sun	175 0784	3932
23 Mar (82)	5 Thur	4 13 48	18 Mar (77)	0 Sat.	209 7609	3933
22 Mar (82)	6 Fri	16 25 57	6 Mar (66)	4 Wed	85 4837	3934
22 Mar (81)	0 Sat.	16 38 6	24 Feb (55)	2 Mon	299 8385	3935
22 Mar (81)	1 Sun.	22 50 15	14 Mar (73)	0 Sat.	9995 8889 §	3936
23 Mar (82)	3 Tues	5 2 24	4 Mar (63)	5 Thur	210 2438	3937
22 Mar (82)	4 Wed	11 14 33	22 Mar (82)	4 Wed.	244 9282	3938
22 Mar (81)	5 Thur	17 26 42	11 Mar (70)	1 Sun	120 6490	3939
22 Mar (81)	6 Fri	23 38 51	28 Feb (59)	5 Thur	9996 3718 §	3940
23 Mar (82)	1 Sun	5 51 0	19 Mar (78)	4 Wed	81 0542	3941
22 Mar (82)	2 Mon	12 3 9	8 Mar (68)	2 Mon	245 4090	3942
22 Mar (81)	3 Tues	18 15 18	25 Feb (56)	6 Fri	121 1819	3943
23 Mar (82)	5 Thur	0 27 27	16 Mar (75)	5 Thur	155 8143	3944
23 Mar (82)	6 Fri	6 39 36	5 Mar (64)	2 Mon	31 5372	3915

§ Chaitra *śukla* 1 was suppressed.

CONCURRENT YEAR						JOVIAN SAMVATSARA		Mean intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3946	767	902	251	19 20	*844-45	58 Raktāksha	.	2 Vaiśākha .
3947	768	903	252	20-21	845-46	59 Krōdhana		
3948	769	904	253	21-22	846-47	60 Kshaya		10 Pausha
3949	770	905	254	22-23	847-48	1 Prabhava		.
3950	771	906	255	23 24	*848-49	2 Vibhava		...
3951	772	907	256	24 25	849-50	3 Śukla	. .	7 Aśvina .
3952	773	908	257	25-26	850 51	4 Pramōda		
3953	774	909	258	26 27	851-52	5 Prajāpati .	.	
3954	775	910	259	27-28	*852-53	6 Angiras .		3 Jyēshtha
3955	776	911	260	28 29	853-54	7 Śrīmukha		. .
3956	777	912	261	29 30	854-55	8 Bhāva .		12 Phālguna
3957	778	913	262	30-31	855-56	9 Yuvan .		
3958	779	914	263	31-32	*856-57	10 Dhātṛi		
3959	780	915	264	32 33	857-58	11 Īśvara	.	8 Kārttika .
3960	781	916	265	33-34	858-59	12 Bahudhānya		. .
3961	782	917	266	34 35	859 60	13 Pramāthin	.	..
3962	783	918	267	35-36	*860 61	14 Vikrama	.	5 Srāvana .
3963	784	919	268	36 37	861-62	15 Vṛisha .		
3964	785	920	269	37-38	862 63	16 Chitrabhānu	.	..
3965	786	921	270	38-39	863 64	17. Subhānu	. .	2 Vaiśākha .
3966	787	922	271	39-40	*864 65	18 Tārana		...
3967	788	923	272	40-41	865 66	19 Pārthiva .	.	10 Pausha .
3968	789	924	273	41-42	866-67	20 Vyaya .	.	...
3969	790	925	274	42-43	867 68	21 Sarvajit .	.	...
3970	791	926	275	43-44	*868-69	22 Sarvadhārin .	.	7 Aśvina .

XC—*contd*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali.
Day and month, A.D	Week-day.	Time of mean Mēsha samkrānti.	Day and month, A.D	Week-day	*a* (here = *t*, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
22 Mar (82) .	0 Sat.	12 51 45	23 Feb (54)	0 Sat.	245 8919	3946
22 Mar (81) . .	1 Sun	19 3 54	18 Mar (76)	6 Fri	280 5743	3947
23 Mar (82) .	3 Tues .	1 16 3	2 Mar (61) .	3 Tues	156 2972	3948
23 Mar. (82) . .	4 Wed	7 28 12	21 Mar (80)	2 Mon	190·9796	3949
22 Mar (82) .	5 Thur.	13 40 21	9 Mar (69)	6 Fri	66 7024	3950
22 Mar (81)	6 Fri	19 52 30	27 Feb (58)	4 Wed.	281 0572	3951
23 Mar. (82) .	1 Sun	2 4 39	18 Mar (77)	3 Tues .	315 7897	3952
23 Mar (82)	2 Mon	8 16 48	7 Mar (66)	0 Sat.	191 4624	3953
22 Mar. (82) .	3 Tues.	14 28 57	24 Feb (55)	4 Wed	67 1853	3954
22 Mar (81) . .	4 Wed	20 41 6	14 Mar (73)	3 Tues	101 8677	3955
23 Mar (82)	6 Fri	2 53 15	4 Mar (63) .	1 Sun	316 2225	3956
23 Mar (82) .	0 Sat.	9 5 24	22 Mar (81)	6 Fri	12 2729	3957
22 Mar (82) .	1 Sun	15 17 33	11 Mar (71)	4 Wed .	226 6278	3958
22 Mar (81)	2 Mon	21 29 42	28 Feb (59)	1 Sun .	102 3506	3959
23 Mar (82)	4 Wed	3 41 51	19 Mar (78)	0 Sat.	187 0329 .	3960
23 Mar. (82) .	5 Thur	9 54 0	8 Mar. (67)	4 Wed. .	12 7558	3961
22 Mar. (82) .	6 Fri.	16 6 9	28 Feb (57)	2 Mon. .	227 1107	3962
22 Mar (81) .	0 Sat.	22 18 18	16 Mar (75)	1 Sun .	261·7930	3963
23 Mar (82)	2 Mon	4 30 27	5 Mar (64)	5 Thur.	187 5159	3964
23 Mar (82)	3 Tues	10 42 36	22 Feb (53)	2 Mon .	13·2387	3965
22 Mar (82) .	4 Wed,	16 54 45	12 Mar (72)	1 Sun.	47 9211	3966
22 Mar (81) .	5 Thur	23 6 54	2 Mar. (61) .	6 Fri.	262·2759	3967
23 Mar (82)	0 Sat.	5 19 3	21 Mar (80)	5 Thur. .	296·9584	3968
23 Mar (82)	1 Sun	11 31 12	10 Mar (69)	2 Mon. .	172 6812	3969
22 Mar (82)	2 Mon	17 43 21	27 Feb (58)	6 Fri.	48 4039	3970

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CONCURRENT YEAR						JOVIAN SAMVATSARA		Mean intercalated (adhika) lunar month.
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3971	792	927	276	44-45	869-70		23 Virōdhin	
3972	793	928	277	45-46	870-71		24 Vikṛita	...
3973	794	929	278	46-47	871-72		25 Khara	3 Jyēshtha
3974	795	930	279	47-48	*872-73		26 Nandana	..
3975	796	931	280	48-49	873-74		27 Vijaya	12 Phālguna
3976	797	932	281	49 50	874-75		28 Jaya	
3977	798	933	282	50-51	875-76		29 Manmatha	
3978	799	934	283	51-52	*876-77		30 Durmukha	8 Kārttika
3979	800	935	284	52-53	877-78		31 Hēmalamba	
3980	801	936	285	53 54	878 79		32 Vilamba	
3981	802	937	286	54 55	879-80		33 Vikārin	5 Śrāvana
3982	803	938	287	55-56	*880 81		34 Śārvarin	...
3983	804	939	288	56-57	881-82		35 Plava	
3984	805	940	289	57-58	882-83		36 Śubhakṛit	1 Chaitra
3985	806	941	290	58-59	883 84		37 Śōbhana	
3986	807	942	291	59 60	*884-85		38 Krōdhin	10 Pausha
3987	808	943	292	60 61	885-86		39 Viśvāvasu	...
3988	809	944	293	61-62	886 87		40 Parābhava	...
3989	810	945	294	62 63	887-88		41 Plavanga	6 Bhādrapada
3990	811	946	295	63 64	*888-89		42 Kīlaka	...
3991	812	947	296	64-65	889-90		43 Saumya	...
3992	813	948	297	65 66	890 91		44 Sādhārana	3 Jyēshtha
3993	814	949	298	66 67	891-92		45 Virōdhakṛit	...
3994	815	950	299	67-68	*892-93		46 Paridhāvin	11 Māgha
3995	816	951	300	68-69	893 94		47 Pramādin	...

XC—*contd.*

COMMENCEMENT OF THE						Kah.
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week day	*a* (here=*t*, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
22 Mar (81)	3 Tues.	23 55 30	17 Mar (76)	5 Thur	83 0864	3971
23 Mar. (82)	5 Thur.	6 7 39	7 Mar (66)	3 Tues	297 4412	3972
23 Mar (82)	6 Fri	12 19 48	24 Feb (55)	0 Sat	173 1641	3973
22 Mar. (82)	0 Sat.	18 31 57	14 Mar (74)	6 Fri	207 8464	3974
23 Mar (82)	2 Mon	0 44 6	3 Mar. (62)	3 Tues	83 5693	3975
23 Mar (82)	3 Tues	6 56 15	22 Mar (81)	2 Mon	118 2517	3976
23 Mar (82)	4 Wed	13 8 24	12 Mar (71)	0 Sat	332 6065	3977
22 Mar (82)	5 Thur.	19 20 33	29 Feb (60)	4 Wed	208 3293	3978
23 Mar (82)	0 Sat.	1 32 42	19 Mar (78)	3 Tues	243 0118	3979
23 Mar (82)	1 Sun	7 44 51	8 Mar (67)	0 Sat	118 7846	3980
23 Mar (82)	2 Mon	13 57 0	26 Feb (57)	5 Thu	333·0894	3981
22 Mar (82)	3 Tues	20 9 9	15 Mar (75)	3 Tues	29 1398	3982
23 Mar (82)	5 Thur	2 21 18	5 Mar (64)	1 Sun	243 4947	3983
23 Mar (82)	6 Fri	8 33 27	22 Feb (53)	5 Thur	119 2175	3984
23 Mar (82)	0 Sat.	14 45 36	13 Mar. (72)	4 Wed.	153 8998	3985
22 Mar (82)	1 Sun	20 57 45	1 Mar (61)	1 Sun	29 6227	3986
23 Mar (82)	3 Tues	3 9 54	20 Mar (79)	0 Sat	64 3052	3987
23 Mar (82)	4 Wed	9 22 3	10 Mar (69)	5 Thur	278 6599	3988
23 Mar (82)	5 Thur	15 34 12	27 Feb (58)	2 Mon	154 3828	3989
22 Mar (82)	6 Fri	21 46 21	17 Mar (77)	1 Sun	189·0652	3990
23 Mar. (82)	1 Sun	3 58 30	6 Mar (65)	5 Thur	64 7881	3991
23 Mar. (82)	2 Mon	10 10 39	24 Feb (55)	3 Tues	279 1428	3992
23 Mar. (82)	3 Tues	16 22 48	15 Mar (74)	2 Mon	318 8252	3993
22 Mar. (82)	4 Wed.	22 34 57	3 Mar. (63)	6 Fri	189 5481	3994
23 Mar. (82)	6 Fri.	4 47 6	22 Mar. (81)	5 Thur	224 2304	3995

TABLE

						JOVIAN SAMVATSARA.		Year intercalated (adhika) lunar month
Kali	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
3996	817	952	301	69 70	894-95	48 Ānanda		...
3997	818	953	302	70 71	895 96	49 Rākshasa		8 Kārttika
3998	819	954	303	71-72	*896-97	50 Anala		...
3999	820	955	304	72-73	897-98	51 Pingala		..
4000	821	956	305	73 74	898-99	52 Kālayukta		5 Śrāvana
4001	822	957	306	74-75	899-900	53 Siddhārthin		...
4002	823	958	307	75 76	*900 01	54 Raudra		..
4003	824	959	308	76-77	901 02	55 Durmati		1 Chaitra
4004	825	960	309	77-78	902 03	56 Dundubhi		..
4005	826	961	310	78-79	903-04	57 Rudhirōdgārin†		10 Pausha
4006	827	962	311	79 80	*904-05	58 Raktāksha	59 Krōdhana	.
4007	828	963	312	80 81	905 06	59 Krōdhana	60 Kshaya	...
4008	829	964	313	81-82	906-07	60 Kshaya	1 Prabhava	6 Bhādrapada
4009	830	965	314	82-83	907 08	1 Prabhava	2 Vibhava	..
4010	831	966	315	83 84	*908-09	2 Vibhava	3 Śukla	.
4011	832	967	316	84 85	909-10	3 Śukla	4 Pramōda	3 Jyēshtha
4012	833	968	317	85-86	910 11	4 Pramōda	5 Prajāpati	.
4013	834	969	318	86-87	911-12	5 Prajāpati	6 Angiras	11 Māgha
4014	835	970	319	87-88	*912-13	6 Angiras	7 Śrīmukha	..
4015	836	971	320	88-89	913 14	7 Śrīmukha	8 Bhāva	.
4016	837	972	321	89-90	914-15	8 Bhāva	9 Yuvan	8 Kārttika
4017	838	973	322	90-91	915-16	9 Yuvan	10 Dhātri	.
4018	839	974	323	91-92	*916-17	10 Dhātri	11 Īśvara	..
4019	840	975	324	92-93	917-18	11 Īśvara	12 Bahudhānya	4 Ashādha
4020	841	976	325	93 94	918-19	12 Bahudhānya	13 Pramāthin	..

† 58 Raktāksha was suppressed in the north   By southern reckoning there was no suppression, and there has been none since. By *Brahma-Siddhānta* "true" reckoning K Y 4006, A D. 904 05, was 58 Raktāksha, 59 Krōdhana being suppressed in the north

XC—*contd*

COMMENCEMENT OF THE						Kali
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week-day	*a* (here=*t*, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	0 Sat.	10 59 15	11 Mar (70)	2 Mon	99 9533	3996
23 Mar (82)	1 Sun	17 11 24	1 Mar (60)	0 Sat.	314 3081	3997
22 Mar (82)	2 Mon	23 23 33	18 Mar (78)	5 Thur	10 3584	3998
23 Mar (82)	4 Wed	5 35 42	8 Mar (67)	3 Tues	224 7133	3999
23 Mar (82)	5 Thur	11 47 51	25 Feb (56)	0 Sat.	100 4362	4000
23 Mar (82)	6 Fri	18 0 0	16 Mar (75)	6 Fri	135 1186	4001
23 Mar (83)	1 Sun	0 12 9	4 Mar (64)	3 Tues	10 8415	4002
23 Mar (82)	2 Mon	6 24 18	22 Feb (53)	1 Sun	225 4963	4003
23 Mar (82)	3 Tues	12 36 27	13 Mar (72)	0 Sat.	259 8786	4004
23 Mar (82)	4 Wed	18 48 36	2 Mar (61)	4 Wed	135 6015	4005
23 Mar (83)	6 Fri	1 0 45	20 Mar (80)	3 Tues	170 2839	4006
23 Mar (82)	0 Sat.	7 12 54	9 Mar. (68)	0 Sat	46 0067	4007
23 Mar (82)	1 Sun.	13 25 3	27 Feb (58)	5 Thur	260 3616	4008
23 Mar (82)	2 Mon	19 37 12	18 Mar (77)	4 Wed.	295 0440	4009
23 Mar (83)	4 Wed	1 49 21	6 Mar (66)	1 Sun	170·7668	4010
23 Mar (82)	5 Thur	8 1 30	23 Feb (54)	5 Thur	46 4896	4011
23 Mar (82)	6 Fri	14 13 39	14 Mar (73)	4 Wed.	81 1720	4012
23 Mar (82)	0 Sat.	20 25 48	4 Mar (63)	2 Mon	295 5269	4013
23 Mar (83)	2 Mon	2 37 57	22 Mar (82)	1 Sun	330 2092	4014
23 Mar (82)	3 Tues	8 50 6	11 Mar (70)	5 Thur	205 9321	4015
23 Mar (82)	4 Wed	15 2 15	28 Feb (59)	2 Mon	81 6549	4016
23 Mar (82)	5 Thur	21 14 24	19 Mar (78)	1 Sun.	116 3373	4017
23 Mar (83)	0 Sat	3 26 33	8 Mar (68)	6 Fri	330 6921	4018
23 Mar (82)	1 Sun	9 38 42	25 Feb (56)	3 Tues	206 4150	4019
23 Mar (82)	2 Mon	15 50 51	16 Mar (75)	2 Mon	241·0974	40?0

TABLE

| | | | | CONCURRENT YEAR. | | | | Mean intercalated (adhika) lunar month |
| Kali | Śaka | Chaitrādi Vikrama | Mēshādi solar year in Bengal | Kollam | A.D. | Jovian Samvatsara Southern system | Jovian Samvatsara Northern system | |
1	2	3	3a	4	5	6	7	8a
4021	842	977	826	94-95	919-20	13 Pramāthin	14 Vikrama	...
4022	843	978	827	95-96	*920-21	14 Vikrama	15 Vrisha	1 Chaitra
4023	844	979	828	96-97	921-22	15 Vrisha	16 Chitrabhānu	...
4024	845	980	829	97-98	922-23	16 Chitrabhānu	17 Subhānu	9 Mārgaśira
4025	846	981	830	98-99	923-24	17 Subhānu	18 Tārana	...
4026	847	982	831	99-100	*924-25	18 Tārana	19 Pārthiva	...
4027	848	983	832	100-01	925-26	19 Pārthiva	20 Vyaya	6 Bhādrapada
4028	849	984	833	101-02	926-27	20 Vyaya	21 Sarvajit	...
4029	850	985	834	102-03	927-28	21 Sarvajit	22 Sarvadhārin	...
4030	851	986	835	103-04	*928-29	22 Sarvadhārin	23 Virōdhin	2 Vaiśākha
4031	852	987	836	104-05	929-30	23 Virōdhin	24 Vikrita	...
4032	853	988	837	105-06	930-31	24 Vikrita	25 Khara	11 Māgha
4033	854	989	838	106-07	931-32	25 Khara	26 Nandana	...
4034	855	990	839	107-08	*932-33	26 Nandana	27 Vijaya	...
4035	856	991	840	108-09	933-34	27 Vijaya	28 Jaya	7 Āśvina
4036	857	992	841	109-10	934-35	28 Jaya	29 Manmatha	...
4037	858	993	842	110-11	935-36	29 Manmatha	30 Durmukha	.
4038	859	994	843	111-12	*936-37	30 Durmukha	31 Hēmalamba	4 Āshādha
4039	860	995	844	112-13	937-38	31 Hēmalamba	32 Vilamba	.
4040	861	996	845	113-14	938-39	32 Vilamba	33 Vikārin	.
4041	862	997	846	114-15	939-40	33 Vikārin	34 Sārvarin	..
4042	863	998	847	115-16	*940-41	34 Sārvarin	35 Plava	1 Chaitra
4043	864	999	848	116-17	941-42	35 Plava	36 Śubhakrit	...
4044	865	1000	349	117-18	942-43	36 Subhakrit	37 Śōbhana	9 Mārgaśira
4045	866	1001	350	118-19	943-44	37 Śōbhana	38 Krōdhin	...

XC—*contd.*

COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			
Day and month, A.D	Week-day	Time of mean Misha-samkrānti	Day and month, A.D	Week-day.	a (here=t, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82)	3 Tues	22 3 0	5 Mar (64)	6 Fri	116 8202	4021
23 Mar (83)	5 Thur	4 15 9	23 Feb (54)	4 Wed	331 1750	4022
23 Mar (82)	6 Fri	10 27 18	12 Mar. (71)	2 Mon	27 2254	4023
23 Mar (82)	0 Sat	16 39 27	2 Mar (61)	0 Sat.	241·5802	4024
23 Mar (82)	1 Sun	22 51 36	21 Mar (80)	6 Fri	276 2626	4025
23 Mar (83)	3 Tues	5 3 45	9 Mar (69)	3 Tues.	151·9855	4026
23 Mar. (82)	4 Wed.	11 15 54	26 Feb (57)	0 Sat.	27 7084	4027
23 Mar (82)	5 Thur.	17 28 3	17 Mar (76)	6 Fri	62 3907	4028
23 Mar (82)	6 Fri	23 40 12	7 Mar. (66)	4 Wed.	276 7455	4029
23 Mar (83)	1 Sun	5 52 21	24 Feb (55)	1 Sun	152 4684	4030
23 Mar (82)	2 Mon	12 4 30	14 Mar. (73)	0 Sat.	187 1507	4031
23 Mar (82)	3 Tues	18 16 39	8 Mar (62)	4 Wed	62 8736	4032
24 Mar. (83)	5 Thur	0 28 48	22 Mar. (81)	3 Tues.	97 5560	4033
23 Mar. (83)	6 Fri	6 40 57	11 Mar. (71)	1 Sun	311·9109	4034
23 Mar (82)	0 Sat.	12 53 6	28 Feb. (59)	5 Thur.	187 6886	4035
23 Mar. (82)	1 Sun	19 5 15	19 Mar (78)	4 Wed.	222 8161	4036
24 Mar (83)	3 Tues	1 17 24	8 Mar. (67)	1 Sun	98 0389	4037
23 Mar (83)	4 Wed.	7 29 33	26 Feb. (57)	6 Fri	312 3938	4038
23 Mar (82)	5 Thur.	13 41 42	16 Mar. (74)	4 Wed.	8 4441	4039
23 Mar (82)	6 Fri.	19 53 51	5 Mar (64)	2 Mon	222·7990	4040
24 Mar (83)	1 Sun.	2 6 0	22 Feb (53)	6 Fri.	98 5218	4041
23 Mar (83)	2 Mon	8 18 9	12 Mar. (72)	5 Thur	133 2042	4042
23 Mar (82)	3 Tues	14 30 18	1 Mar. (60)	2 Mon	8·9270	4043
23 Mar. (82)	4 Wed	20 42 27	20 Mar. (79)	1 Sun.	43·6094	4044
24 Mar (83)	6 Fri.	2 54 36	10 Mar. (69)	6 Fri.	257·9643	4045

TABLE

						JOVIAN SAMVATSARA		Mean intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	3	3 a	4	5	6	7	8a
4046	867	1002	351	119 20	*944-45	38 Krōdhin	39 Viśvāvasu	6 Bhādrapada .
4047	868	1003	352	120 21	945-46	39 Viśvāvasu	40 Parābhava	.
4048	869	1004	353	121-22	946-47	40 Parābhava	41 Plavanga	.
4049	870	1005	354	122-23	947-48	41 Plavanga	42 Kīlaka	2 Vaiśākha .
4050	871	1006	355	123-24	*948-49	42 Kīlaka	43 Saumya	.
4051	872	1007	356	124-25	949 50	43 Saumya	44 Sādhārana	11 Māgha .
4052	873	1008	357	125-26	950 51	44 Sādhārana	45 Virōdhakrit	.
4053	874	1009	358	126-27	951-52	45 Virōdhakrit	46 Paridhāvin	.
4054	875	1010	359	127-28	*952-53	46 Paridhāvin	47 Pramādin	7 Āśvina
4055	876	1011	360	128-29	953-54	47 Pramādin	48 Ānanda	
4056	877	1012	361	129 30	954-55	48 Ānanda	49 Rākshasa	. .
4057	878	1013	362	130 31	955-56	49 Rākshasa	50 Anala	4 Āshādha
4058	879	1014	363	131-32	*956-57	50 Anala	51 Pingala	
4059	880	1015	364	132-33	957-58	51 Pingala .	52 Kālayukta	12 Phālguna
4060	881	1016	365	133 34	958-59	52 Kālayukta	53 Siddhārthin	
4061	882	1017	366	134-35	959 60	53 Siddhārthin	54 Raudra	.
4062	883	1018	367	135 36	*960-61	54 Raudra	55 Durmati	9 Mārgaśira
4063	884	1019	368	136-37	961-62	55 Durmati	56 Dundubhi	
4064	885	1020	369	137 38	962-63	56 Dundubhi	57 Rudhirōdgārin	
4065	886	1021	370	138 39	963 64	57 Rudhirōdgārin	58 Raktāksha	5 Srāvana
4066	887	1022	371	139-40	*964 65	58 Raktāksha	59 Krōdhana	
4067	888	1023	372	140-41	965-66	59 Krōdhana	60 Kshaya	.
4068	889	1024	373	141-42	966 67	60 Kshaya	1 Prabhava	.
4069	890	1025	374	142-43	967-68	1 Prabhava	2 Vibhava	2 Vaiśākha .
4070	891	1026	375	143-44	*968-69	2 Vibhava	3 Sukla .	10 Pausha

XC—*contd*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YFAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali.
Day and month, A.D	Week-day	Time of mean Mēsha-samkiānti	Day and month, A D	Week day	*a* (here := *t*, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
23 Mar (83)	0 Sat.	9 6 45	27 Feb (58)	3 Tues	133 6871	4046
23 Mar (82)	1 Sun	15 18 54	17 Mar (76)	2 Mon	168 3695	4047
23 Mar (82)	2 Mon	21 31 3	6 Mar (65)	6 Fri	44 0923	4048
24 Mar (83)	4 Wed	3 43 12	24 Feb (55)	4 Wed	258 4471	4049
23 Mar (83)	5 Thur	9 55 21	14 Mar (74)	3 Tues	293 1295	4050
23 Mar (82)	6 Fri	16 7 30	3 Mar (62)	0 Sat	168 8524	4051
23 Mar (82)	0 Sat	22 19 39	22 Mar (81)	6 Fri	203 5348	4052
24 Mar (83)	2 Mon	4 31 48	11 Mar (70)	3 Tues	79 2576	4053
23 Mar (83)	3 Tues	10 43 57	29 Feb (60)	1 Sun	293 6125	4054
23 Mar (82)	4 Wed	16 56 6	19 Mar (78)	0 Sat.	328 2949	4055
23 Mar (82)	5 Thur	23 8 15	8 Mar (67)	4 Wed	201 0176	4056
24 Mar (83)	0 Sat	5 20 24	25 Feb (56)	1 Sun.	79 7105	4057
23 Mar (83)	1 Sun	11 32 33	15 Mar (75)	0 Sat	114 4229	4058
23 Mar (82)	2 Mon	17 44 42	5 Mar (64)	5 Thur	328 7778	4059
23 Mar (82)	3 Tues	23 56 51	23 Mar (82)	1 Sun	24 8281	4060
24 Mar (83)	5 Thur	6 9 0	13 Mar (72)	1 Sun	239 1830	4061
23 Mar (83)	6 Fri	12 21 9	1 Mar (61)	5 Thur	114 9058	4062
23 Mar (82)	0 Sat	18 33 18	20 Mar (79)	4 Wed	149 5881	4063
24 Mar (83)	2 Mon	0 45 27	9 Mar (68)	1 Sun	25 3110	4064
24 Mar (83)	3 Tues	6 57 36	27 Feb (58)	6 Fri	239 6659	4065
23 Mar (83)	4 Wed	13 9 45	17 Mar (77)	5 Thur	274 3433	4066
23 Mar (82)	5 Thur	19 21 54	6 Mar (65)	2 Mon.	150·0710	4067
24 Mar. (83)	0 Sat	1 34 3	23 Feb (54)	6 Fri	25·7939	4068
24 Mar (83)	1 Sun	7 46 12	14 Mar (73)	5 Thur	60 4763	4069
23 Mar (83)	2 Mon.	13 58 21	3 Mar (63)	3 Tues	274 8311	4070

TABLE

CONCURRENT YEAR								Mean intercalated (*adhika*) lunar month
						JOVIAN SAMVATSARA		
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4071	892	1027	376	144-45	969-70	3 Śukla	4 Pramoda	..
4072	893	1028	377	145-46	970-71	4 Pramōda	5 Prajāpati	...
4073	894	1029	378	146-47	971-72	5 Prajāpati	6 Angiras	7 Āśvina
4074	895	1030	379	147-48	*972 73	6 Angiras	7 Srīmukha	.
4075	896	1031	380	148 49	973-74	7 Śrīmukha	8 Bhāva	..
4076	897	1032	381	149-50	974-75	8 Bhāva	9 Yuvan	4 Āshādha
4077	898	1033	382	150-51	975-76	9 Yuvan	10 Dhātṛi	...
4078	899	1034	383	151-52	*976-77	10 Dhātṛi	11 Īsvara	12 Phālguna
4079	900	1035	384	152-53	977-78	11 Īsvara	12 Bahudhānya	.
4080	901	1036	385	153-54	978-79	12 Bahudhānya	13 Pramāthin	
4081	902	1037	386	154-55	979 80	13 Pramāthin	14 Vikrama	9 Mārgaśira
4082	903	1038	387	155-56	*980-81	14 Vikrama	15 Vṛisha	.
4083	904	1039	388	156-57	981-82	15 Vṛisha	16 Chitrabhānu	
4084	905	1040	389	157-58	982-83	16 Chitrabhānu	17 Subhānu	5 Srāvana
4085	906	1041	390	158-59	983-84	17 Subhānu	18 Tāraṇa	..
4086	907	1042	391	159-60	*984-85	18 Tāraṇa	19 Pārthiva	...
4087	908	1043	392	160-61	985-86	19 Pārthiva	20 Vyaya	2 Vaiśākha
4088	909	1044	393	161-62	986 87	20 Vyaya	21 Sarvajit	...
4089	910	1045	394	162-63	987-88	21 Sarvajit	22 Sarvadhārin	10 Pausha
4090	911	1046	395	163-64	*988-89	22 Sarvadhārin	23 Virōdhin	...
4091	912	1047	396	164 65	989-90	23 Virōdhin	24 Vikṛita †	...
4092	913	1048	397	165-66	990 91	24 Vikṛita	26 *Nandana*	7 Āśvina
4093	914	1049	398	166 67	991 92	25 Khara	27 *Vijaya*	...
4094	915	1050	399	167 68	*992-93	26 Nandana	28 *Jaya*	...
4095	916	1051	400	168-69	993-94	27 Vijaya	29 *Manmatha*	3 Jyēshtha

† 25 Khara was suppressed in the north by the *Brahma-Siddhānta* system, whether calculated by "true" or mean reckoning

XC—*contd*

COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A D	Week-day.	a (here = t, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
23 Mar (82) .	3 Tues	20 10 30	22 Mar (81)	2 Mon	309 5135	4071
24 Mar (83)	5 Thur	2 22 39	11 Mar (70)	6 Fri	185 2364	4072
24 Mar (83)	6 Fri	8 34 48	28 Feb (59)	3 Tues	60 9593	4073
23 Mar (83)	0 Sat	14 46 57	18 Mar (78)	2 Mon	95 6416	4074
23 Mar (82)	1 Sun	20 59 6	8 Mar (67)	0 Sat.	309 9964	4075
24 Mar. (83)	3 Tues.	3 11 15	25 Feb (56)	4 Wed.	185·7193	4076
24 Mar (83)	4 Wed	9 23 24	16 Mar (75)	3 Tues	220 4016	4077
23 Mar (83)	5 Thur	15 35 33	4 Mar · (64)	0 Sat.	96 1245	4078
23 Mar (82)	6 Fri	21 47 42	23 Mar (82)	6 Fri .	180 8069	4079
24 Mar (83)	1 Sun	3 59 51	12 Mar (71)	3 Tues .	6 5298	4080
24 Mar (83)	2 Mon	10 12 0	2 Mar (61)	1 Sun .	220 8845	4081
23 Mar (83)	3 Tues	16 24 9	20 Mar (80)	0 Sat. .	255 5669	4082
23 Mar (82) .	4 Wed.	22 36 18	9 ,Mar. (68)	4 Wed	131 2898	4083
24 Mar (83)	6 Fri	4 48 27	26 Feb (57)	1 Sun.	7 0127	4084
24 Mar (83) .	0 Sat.	11 0 36	17 Mar (76)	0 Sat. .	41 6950	4085
23 Mar (83)	1 Sun.	17 12 45	6 Mar (66) .	5 Thur .	256 0499	4086
23 Mar. (82)	2 Mon	23 24 54	23 Feb (54)	2 Mon .	131·7727	4087
24 Mar (83)	4 Wed	5 37 3	14 Mar (73)	1 Sun .	166 4550	4088
24 Mar (83) .	5 Thur	11 49 12	3 Mar (62)	5 Thur .	42 1779	4089
23 Mar (83)	6 Fri.	18 1 21	21 Mar. (81)	4 Wed .	76 8603	4090
24 Mar (83) .	1 Sun	0 13 30	11 Mar (70) .	2 Mon. .	291 2152	4091
24 Mar (83)	2 Mon.	6 25 39	28 Feb (59)	6 Fri. .	166 9898	4092
24 Mar (83) .	3 Tues.	12 37 48	19 Mar (78)	5 Thur .	201·5204	4093
23 Mar (83)	4 Wed.	18 49 57	7 Mar (67)	2 Mon. .	77 8432	4094
24 Mar (83)	6 Fri. .	1 2 6	25 Feb (56) .	0 Sat. .	291·6980	4095

TABLE

				CONCURRENT YEAR				Mean intercalated (adhika) lunar month
						JOVIAN SAMVATSARA		
Kali.	Saka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4096	917	1052	401	169-70	994-95	28 Jaya	30 *Durmukha*	...
4097	918	1053	402	170 71	995 96	29 Manmatha	31 Hēmalamba	12 Phālguna
4098	919	1054	403	171-72	*996-97	30 Durmukha	32 Vilamba	.
4099	920	1055	404	172-73	997-98	31 Hēmalamba	33 Vikārin .	
4100	921	1056	405	173 74	998-99	32 Vilamba	34 Śārvarın	8 Kārttika .
4101	922	1057	406	174 75	999 1000	33 Vikārın	35 Plava	
4102	923	1058	407	175-76	*1000 01	34 Śārvarın	36 Śubhakṛt	
4103	924	1059	408	176 77	1001-02	35 Plava	37 Śōbhana	5 Śrāvana
4104	925	1060	409	177-78	1002-03	36 Śubhakṛt	38 Krōdhın	
4105	926	1061	410	178-79	1003 04	37 Śōbhana	39 Visvāvasu	...
4106	927	1062	411	179 80	*1004-05	38 Krōdhın	40 Parābhava	1 Chaitra
4107	928	1063	412	180 81	1005-06	39 Visvāvasu	41 Plavanga	..
4108	929	1064	413	181-82	1006-07	40 Parābhava	42 Kīlaka	10 Pausha .
4109	930	1065	414	182-83	1007-08	41 Plavanga	43 Saumya	..
4110	931	1066	415	183 84	*1008 09	42 Kīlaka	44 Sādhārana	...
4111	932	1067	416	184-85	1009-10	43 Saumya .	45 Virōdhakṛt	7 Āśvına†
4112	933	1068	417	185 86	1010-11	44 Sādhārana	46 Parıdhāvın	..
4113	934	1069	418	186-87	1011-12	45 Virōdhakṛt	47 Pramādın	..
4114	935	1070	419	187-88	*1012-13	46 Parıdhāvın	48 Ānanda .	3 Jyēshtha
4115	936	1071	420	188-89	1013-14	47 Pramādın .	49 Rākshasa	
4116	937	1072	421	189-90	1014-15	48 Ānanda	50 Anala	12 Phālguna .
4117	938	1073	422	190-91	1015 16	49 Rākshasa	51 Pıngala	
4118	939	1074	423	191-92	*1016-17	50 Anala .	52 Kālayukta .	
4119	940	1075	424	192-93	1017-18	51 Pıngala .	53 Siddhārthın	8 Kārttika .
4120	941	1076	425	193-94	1018 19	52 Kālayukta	54 Raudra .	...

† See "Remarks," p 215 above

XC—*contd.*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			Kali
Day and month, A D	Week-day.	Time of mean Mēsha-samkrānti	Day and month, A D	Week-day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
		H　M　S				
24 Mar (83)	0 Sat	7　14　15	16 Mar (75)	6 Fri	326 3804	4096
24 Mar (83)	1 Sun	13　26　24	5 Mar (64)	3 Tues	202 1033	4097
23 Mar (83)	2 Mon	19　38　33	23 Mar (83)	2 Mon	236 7856	4098
24 Mar (83)	4 Wed	1　50　42	12 Mar (71)	6 Fri	112 5085	4099
24 Mar (83)	5 Thur	8　2　51	2 Mar (61)	4 Wed	326 8633	4100
24 Mar (83)	6 Fri	14　15　0	20 Mar (79)	2 Mon.	22 9136	4101
23 Mar (83)	0 Sat	20　27　9	9 Mar (69)	0 Sat	237 2685	4102
24 Mar (83)	2 Mon	2　39　18	26 Feb (57)	4 Wed	112 9914	4103
24 Mar (83)	3 Tues	8　51　27	17 Mar (76)	3 Tues	147 6737	4104
24 Mar (83)	4 Wed.	15　3　36	6 Mar (65)	0 Sat	23 3966	4105
23 Mar (83)	5 Thur	21　15　45	24 Feb (55)	5 Thur	237 7514	4106
24 Mar (83)	0 Sat.	3　27　54	14 Mar (73)	4 Wed	272 4338	4107
24 Mar (83)	1 Sun	9　40　3	3 Mar (62)	1 Sun	148 1566	4108
24 Mar (83)	2 Mon	15　52　12	22 Mar (81)	0 Sat	182 8390	4109
23 Mar (83)	3 Tues	22　4　21	10 Mar (70)	4 Wed	58 5618	4110
24 Mar (83)	5 Thur	4　16　30	28 Feb (59)	2 Mon	272 9167	4111
24 Mar (83)	6 Fri	10　28　39	19 Mar (78)	1 Sun	307 5991	4112
24 Mar (83)	0 Sat	16　40　48	8 Mar (67)	5 Thur	183 3219	4113
23 Mar (83)	1 Sun	22　52　57	25 Feb (56)	2 Mon	59 0447	4114
24 Mar (83)	3 Tues	5　5　6	15 Mar (74)	1 Sun	93 7270	4115
24 Mar (83)	4 Wed	11　17　15	5 Mar (64)	6 Fri	308 0820	4116
24 Mar (83)	5 Thur	17　29　24	23 Mar (82)	4 Wed	4 1323	4117
23 Mar (83)	6 Fri.	23　41　33	12 Mar (72)	2 Mon	218 4872	4118
24 Mar (83)	1 Sun	5　53　42	1 Mar (60)	6 Fri	94 2100	4119
24 Mar (83)	2 Mon	12　5　51	20 Mar (79)	5 Thur	128 8924	4120

TABLE

						JOVIAN SAMVATSARA.		Mean intercalated (*adhika*) lunar month
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4121	942	1077	426	194-95	1019-20	53 Siddhārthin	55 Durmati	
4122	943	1078	427	195-96	*1020-21	54 Raudra	56 Dundubhi	5 Śrāvaṇa
4123	944	1079	428	196-97	1021-22	55 Durmati	57 Rudhirōdgārin	
4124	945	1080	429	197-98	1022-23	56 Dundubhi	58 Raktāksha	
4125	946	1081	430	198-99	1023-24	57 Rudhirōdgārin	59 Krōdhana	1 Chaitra
4126	947	1082	431	199-200	*1024-25	58 Raktāksha	60 Kshaya	
4127	948	1083	432	200-01	1025-26	59 Krōdhana	1 Prabhava	10 Pausha
4128	949	1084	433	201-02	1026-27	60 Kshaya	2 Vibhava	
4129	950	1085	434	202-03	1027-28	1 Prabhava	3 Śukla	
4180	951	1086	435	203-04	*1028-29	2 Vibhava	4 Pramōda	6 Bhādrapada
4181	952	1087	436	204-05	1029-30	3 Śukla	5 Prajāpati	
4182	953	1088	437	205-06	1030-31	4 Pramōda	6 Aṅgiras	
4183	954	1089	438	206-07	1031-32	5 Prajāpati	7 Śrīmukha	3 Jyēshtha
4184	955	1090	439	207-08	*1032-33	6 Aṅgiras	8 Bhāva	
4185	956	1091	440	208-09	1033-34	7 Śrīmukha	9 Yuvan	
4186	957	1092	441	209-10	1034-85	8 Bhāva	10 Dhātṛi	11 Māgha
4187	958	1093	442	210-11	1035-86	9 Yuvan	11 Īśvara	
4188	959	1094	443	211-12	*1036-87	10 Dhātṛi	12 Bahudhānya	
4189	960	1095	444	212-13	1037-88	11 Īśvara	13 Pramāthin	8 Kārttika
4140	961	1096	445	213-14	1038-39	12 Bahudhānya	14 Vikrama	
4141	962	1097	446	214-15	1039-40	13 Pramāthin	15 Vṛisha	
4142	963	1098	447	215-16	*1040-41	14 Vikrama	16 Chitrabhānu	4 Āshādha
4143	964	1099	448	216-17	1041-42	15 Vṛisha	17 Subhānu	
4144	965	1100	449	217-18	1042-43	16 Chitrabhānu	18 Tāraṇa	
4145	966	1101	450	218-19	1043-44	17 Subhānu	19 Pārthiva	1 Chaitra

XC—contd

COMMENCEMENT OF THE						Kali
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mêsha-samkrânti	Day and month, A D	Week day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
		H N S				
24 Mar (83)	3 Tues	18 18 0	9 Mar (68)	2 Mon	4 6131	4121
24 Mar (84)	5 Thur	0 30 9	27 Feb (58)	0 Sat	218 9701	4122
24 Mar (83)	6 Fri	6 42 18	17 Mar (76)	6 Fri	258 6525	4123
24 Mar (83)	0 Sat	12 54 27	6 Mar (65)	3 Tues	129 3753	4124
24 Mar (83)	1 Sun	19 6 36	23 Feb (54)	0 Sat	5 0981	4125
24 Mar (84)	3 Tues	1 18 45	13 Mar (73)	6 Fri	39 7806	4126
24 Mar (83)	4 Wed	7 30 54	3 Mar (62)	4 Wed	254 1354	4127
24 Mar (83)	5 Thur	13 43 3	22 Mar (81)	3 Tues	288 8177	4128
24 Mar (83)	6 Fri	19 55 12	11 Mar (70)	0 Sat	164 5406	4129
24 Mar (84)	1 Sun	2 7 21	28 Feb (59)	4 Wed	40 2635	4130
24 Mar (83)	2 Mon	8 19 30	18 Mar (77)	3 Tues	74 9458	4131
24 Mar (83)	3 Tues	14 31 39	8 Mar (67)	1 Sun	289 3006	4132
24 Mar (83)	4 Wed.	20 43 48	25 Feb (56)	5 Thur	165 0235	4133
24 Mar (84)	6 Fri	2 55 57	15 Mar (75)	4 Wed	199 7059	4134
24 Mar (83)	0 Sat	9 8 6	4 Mar. (63)	1 Sun	75 4287	4135
24 Mar (83)	1 Sun	15 20 15	23 Mar (82)	0 Sat	110 1111	4136
24 Mar (83)	2 Mon	21 32 24	13 Mar (72)	5 Thur	324 4660	4137
24 Mar (84)	4 Wed	3 44 33	1 Mar (61)	2 Mon	200 1888	4138
24 Mar (83)	5 Thur	9 56 42	20 Mar (79)	1 Sun	234 8712	4139
24 Mar (83)	6 Fri	16 8 51	9 Mar (68)	5 Thur	110 5940	4140
24 Mar (83)	0 Sat	22 21 0	27 Feb (58)	3 Tues	324 9489	4141
24 Mar (84)	2 Mon	4 33 9	16 Mar (76)	1 Sun	20 9992	4142
24 Mar (83)	3 Tues	10 45 18	6 Mar (65)	6 Fri.	295 3541	4143
24 Mar (83)	4 Wed	16 57 27	23 Feb (54)	3 Tues	111 0793	4144
24 Mar (83)	5 Thur	23 9 36	14 Mar (73)	2 Mon	145 7593	4145

CONCURRENT YEAR								Mean intercalated (adhika) lunar month
						JOVIAN SAMVATSARA		
Kan	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8z
4146	967	1102	451	219 20	*1014 45	18 Tārana	20 Vyaya	9 Mārgaśira
4147	968	1103	452	220 21	1015 16	19 Pārthiva	21 Sarvajit	
4148	969	1104	453	221-22	1046-47	20 Vyaya	22 Sarvadhārin	
4149	970	1105	454	222-23	1047-48	21 Sarvajit	23 Virōdhin	6 Bhādrapada
4150	971	1106	455	223 24	*1048 49	22 Sarvadhārin	24 Vikrita	
4151	972	1107	456	224-25	1049 50	23 Virōdhin	25 Khara	...
4152	973	1108	457	225 26	1050-51	24 Vikrita	26 Nandana	3 Jyēshtha
4153	974	1109	458	226-27	1051-52	25 Khara	27 Vijaya	
4154	975	1110	459	227-28	*1052 53	26 Nandana	28 Jaya	11 Māgha
4155	976	1111	460	228-29	1053 54	27 Vijaya	29 Manmatha	...
4156	977	1112	461	229 30	1054-55	28 Jaya	30 Durmukha	...
4157	978	1113	462	230-31	1055-56	29 Manmatha	31 Hēmalamba	8 Kārttika
4158	979	1114	463	231-32	*1056-57	30 Durmukha	32 Vilamba	...
4159	980	1115	464	232-33	1057-58	31 Hēmalamba	33 Vikārin	
4160	981	1116	465	233-34	1058 59	32 Vilamba	34 Śārvarin	4 Āshādha
4161	982	1117	466	234-35	1059-60	33 Vikārin	35 Plava	
4162	983	1118	467	235-36	*1060 61	34 Sārvarin	36 Śubhakrit	
4163	984	1119	468	236 37	1061-62	35 Plava	37 Śōbhana	1 Chaitra
4164	985	1120	469	237-38	1062 63	36 Śubhakrit	38 Krōdhin	
4165	986	1121	470	238-39	1063-64	37 Śōbhana	39 Viśvāvasu	9 Mārgaśira
4166	987	1122	471	239 40	*1064-65	38 Krōdhin	40 Parābhava	
4167	988	1123	472	240-41	1065-66	39 Viśvāvasu	41 Plavanga	
4168	989	1124	473	241-42	1066-67	40 Parābhava	42 Kīlaka	6 Bhādrapada
4169	990	1125	474	242-43	1067-68	41 Plavanga	43 Saumya	...
4170	991	1126	475	243-44	*1068-69	42 Kīlaka	44 Sadhārana	...

XC—*contd.*

COMMENCEMENT OF THE						Kali
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D	Week-day	Time of mean Mēsha-samkrānti.	Day and month, A. D.	Week-day.	a (here $= t$, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
24 Mar (84)	0 Sat.	5 21 45	2 Mar (62)	6 Fri.	21 4821	4146
24 Mar (83)	1 Sun	11 33 54	21 Mar (80)	5 Thur	56 1645	4147
24 Mar (83)	2 Mon.	17 46 3	11 Mar (70)	3 Tues	270 5194	4148
24 Mar (83)	3 Tues	23 58 12	28 Feb (59)	0 Sat.	146 2422	4149
24 Mar (84)	5 Thur	6 10 21	18 Mar (78)	6 Fri	180 9246	4150
24 Mar (83)	6 Fri	12 22 30	7 Mar (66)	3 Tues	56 6475	4151
24 Mar (83)	0 Sat.	18 34 89	25 Feb (56)	1 Sun	271 0023	4152
25 Mar (84)	2 Mon	0 46 48	16 Mar (75)	0 Sat.	305 6846	4153
24 Mar (84)	3 Tues	6 58 57	4 Mar (64)	4 Wed.	181 4075	4154
24 Mar (83)	4 Wed	13 11 6	23 Mar (82)	3 Tues	216 0899	4155
24 Mar (83)	5 Thur	19 23 15	12 Mar (71)	0 Sat.	91 8127	4156
25 Mar (84)	0 Sat.	1 35 24	2 Mar. (61)	5 Thur	306 1675	4157
24 Mar (84)	1 Sun	7 47 33	19 Mar (79)	3 Tues	2 2180	4158
24 Mar (83)	2 Mon	13 59 42	9 Mar. (68)	1 Sun	216 5728	4159
24 Mar (83)	3 Tues	20 11 51	26 Feb. (57)	5 Thur	92 2956	4160
25 Mar (84)	5 Thur	2 24 0	17 Mar (76)	4 Wed	126 9780	4161
24 Mar (84)	6 Fri	8 36 9	5 Mar (65)	1 Sun.	2 7009	4162
24 Mar (83)	0 Sat.	14 48 18	23 Feb (54)	6 Fri.	217 0556	4163
24 Mar. (83)	1 Sun	21 0 27	14 Mar (73)	5 Thur.	251-7380	4164
25 Mar (84)	3 Tues.	8 12 36	3 Mar (62)	2 Mon.	127 4809	4165
24 Mar (84)	4 Wed	9 24 45	21 Mar (81)	1 Sun.	162 1433	4166
24 Mar (83)	5 Thur.	15 36 54	10 Mar. (69)	5 Thur.	37 8661	4167
24 Mar (83)	6 Fri	21 49 8	28 Feb (59)	3 Tues.	252 2210	4168
25 Mar (84)	1 Sun	4 1 12	19 Mar. (78)	2 Mon.	286 9054	4169
24 Mar. (84)	2 Mon.	10 13 21	7 Mar. (67)	6 Fri.	162 6262	4170

TABLE

CONCURRENT YEAR							Mean intercalated (adhika) lunar month
					JOVIAN SAMVATSARA		
Kali.	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4171	992	1127	476	244-45	1069 70	43 Saumya	45 Virōdhakṛit	2 Vaiśākha
4172	993	1128	477	245-46	1070 71	44 Sādhārana	46 Paridhāvin	.
4173	994	1129	478	246 47	1071-72	45 Virōdhakṛit	47 Pramādin	11 Māgha
4174	995	1130	479	247-48	*1072-73	46 Paridhāvin	48 Ānanda	.
4175	996	1131	480	248-49	1073-74	47 Pramādin	49 Rākshasa	
4176	997	1132	481	249-50	1074-75	48 Ānanda .	50 Anala†	7 Āśvina .
4177	998	1133	482	250-51	1075-76	49 Rākshasa	52 Kālayukta	.
4178	999	1134	483	251-52	*1076-77	50 Anala	53 Siddhārthin	.
4179	1000	1135	484	252-53	1077-78	51 Pingala .	54 Raudra .	4 Āshāḍha .
4180	1001	1136	485	253-54	1078-79	52 Kālayukta	55 Durmati .	...
4181	1002	1137	486	254-55	1079 80	53 Siddhārthin	56 Dundubhi	12 Phālguna .
4182	1003	1138	487	255-56	*1080 81	54 Raudra	57 Rudhirōdgārin	...
4183	1004	1139	488	256-57	1081-82	55 Durmati	58 Raktāksha	
4184	1005	1140	489	257-58	1082-83	56 Dundubhi	59 Krōdhana	9 Mārgaśira .
4185	1006	1141	490	258-59	1083-84	57 Rudhirōdgārin	60 Kshaya	.
4186	1007	1142	491	259 60	*1084 85	58 Raktāksha	1 Prabhava	
4187	1008	1143	492	260 61	1085 86	59 Krōdhana	2 Vibhava .	6 Bhādrapada .
4188	1009	1144	493	261-62	1086-87	60 Kshaya	3 Śukla .	...
4189	1010	1145	494	262-63	1087-88	1 Prabhava	4 Pramōda	.
4190	1011	1146	495	263-64	*1088-89	2 Vibhava .	5 Prajāpati	2 Vaiśākha
4191	1012	1147	496	264-65	1089-90	3 Śukla .	6 Angiras .	. .
4192	1013	1148	497	265-66	1090-91	4 Pramōda	7 Śrimukha	11 Māgha
4193	1014	1149	498	266-67	1091-92	5 Prajāpati	8 Bhāva	...
4194	1015	1150	499	267-68	*1092-93	6 Angiras	9 Yuvan	. .
4195	1016	1151	500	268-69	1093-94	7 Śrimukha	10 Dhātṛi	7 Āśvina .

† 51 Pingala was suppressed in the north, according to both "true" and mean systems, in Brahma-Siddhānta reckoning

XC—*contd*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A.D	Week day	Time of mean Mêsha-samkrānti	Day and month, A D	Week-day.	a (here $= t$, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
24 Mar (83)	3 Tues	16 25 30	24 Feb (55)	3 Tues	38 3490	4171
21 Mar. (83)	4 Wed.	22 37 39	15 Mar. (74)	2 Mon	73 0314	4172
25 Mar (84)	6 Fri	4 49 48	5 Mar (64)	0 Sat	287 3863	4173
24 Mar. (84)	0 Sat	11 1 57	23 Mar. (83)	6 Fri	322 0686	4174
24 Mar (83)	1 Sun	17 14 6	12 Mar (71)	3 Tues	197 7915	4175
24 Mar (83)	2 Mon	23 26 15	1 Mar (60)	0 Sat	73 5143	4176
25 Mar. (84)	4 Wed.	5 38 24	20 Mar (79)	6 Fri	105 1967	4177
24 Mar (84)	5 Thur	11 50 33	9 Mar (69)	4 Wed	322 5515	4178
24 Mar (83)	6 Fri	18 2 42	26 Feb (57)	1 Sun	198 2744	4179
25 Mar. (84)	1 Sun	0 14 51	17 Mar (76)	0 Sat	232 9568	4180
25 Mar (84)	2 Mon	6 27 0	6 Mar (65)	4 Wed	108 6796	4181
24 Mar. (84)	3 Tues	12 39 9	24 Mar (84)	3 Tues	143 3620	4182
24 Mar (83)	4 Wed	18 51 18	13 Mar (72)	0 Sat	19 0848	4183
25 Mar (84)	6 Fri	1 3 27	3 Mar. (62)	5 Thur	233 4397	4184
25 Mar. (84)	0 Sat.	7 15 36	22 Mar. (81)	4 Wed	268 1220	4185
24 Mar (84)	1 Sun	13 27 45	10 Mar (70)	1 Sun	143 8449	4186
24 Mar (83)	2 Mon	19 39 54	27 Feb (58)	5 Thur	19 5678	4187
25 Mar. (84)	4 Wed	1 52 3	18 Mar (77)	4 Wed.	54 2501	4188
25 Mar. (84)	5 Thur	8 4 12	8 Mar (67)	2 Mon	268 6050	4189
24 Mar. (84)	6 Fri	14 16 21	25 Feb (56)	6 Fri	144 3278	4190
24 Mar (83)	0 Sat	20 28 30	15 Mar (74)	5 Thur	179 0102	4191
25 Mar (84)	2 Mon.	2 40 39	4 Mar. (63)	2 Mon	54 7380	4192
25 Mar. (84)	3 Tues	8 52 48	23 Mar (82)	1 Sun.	89 4154	4193
24 Mar. (84)	4 Wed	15 4 57	12 Mar (72)	6 Fri	203 7703	4194
24 Mar. (83)	5 Thur.	21 17 6	1 Mar (60)	3 Tues	179 4930	4195

TABLE

						JOVIAN SAMVATSARA.		Mean intercalated (*adhika*) lunar month
Kali	Saka	Chaitrādi Vikrama.	Mēshādi solar sons in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4196	1017	1152	501	269-70	1094-95	8 Bhāva	11 Iśvara	
4197	1018	1153	502	270-71	1095-96	9 Yuvan	12 Bahudhānya	..
4198	1019	1154	503	271-72	*1096-97	10 Dhātṛ	13 Pramāthin	4 Āshādha
4199	1020	1155	504	272-73	1097 98	11 Iśvara	14 Vikrama	
4200	1021	1156	505	273 74	1098-99	12 Bahudhānya	15 Vrisha	12 Phālguna
4201	1022	1157	506	274-75	1099-1100	13 Pramāthin	16 Chitrabhānu	
4202	1023	1158	507	275-76	*1100 01	14 Vikrama	17 Subhānu	
4203	1024	1159	508	276 77	1101 02	15 Vrisha	18 Tārana	9 Mārgaśira
4204	1025	1160	509	277-78	1102 03	16 Chitrabhānu	19 Pārthiva	...
4205	1026	1161	510	278-79	1103 04	17 Subhānu	20 Vyaya	..
4206	1027	1162	511	279 80	*1104 05	18 Tārana	21 Sarvajit	5 Śrāvana
4207	1028	1163	512	280 81	1105 06	19 Pārthiva	22 Sarvadhārin	...
4208	1029	1164	513	281 82	1106 07	20 Vyaya	23 Virōdhin	
4209	1030	1165	514	282-83	1107-08	21 Sarvajit	24 Vikṛta	2 Vaisākha
4210	1031	1166	515	283 84	*1108 09	22 Sarvadhārin	25 Khara	..
4211	1032	1167	516	284 85	1109 10	23 Virōdhin	26 Nandana	10 Pausha
4212	1033	1168	517	285 86	1110 11	24 Vikṛta	27 Vijaya	...
4213	1034	1169	518	286-87	1111-12	25 Khara	28 Jaya	
4214	1035	1170	519	287-88	*1112 13	26 Nandana	29 Manmatha	7 Āśvina
4215	1036	1171	520	288 89	1113 14	27 Vijaya	30 Durmukha	
4216	1037	1172	521	269-90	1114-15	28 Jaya	31 Hēmalamba	
4217	1038	1173	522	290 91	1115 16	29 Manmatha	32 Vilamba	3 Jyēshtha
4218	1039	1174	523	291 92	*1116-17	30 Durmukha	33 Vikārin	...
4219	1040	1175	524	292-93	1117 18	31 Hēmalamba	34 Śārvarin	12 Phālguna
4220	1041	1176	525	293 94	1118-19	32 Vilamba	35 Plava	..

CONCURRENT YEAR

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COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D	Week-day	Time of mean Mésha-samkrānti	Day and month, A.D.	Week-day	a (here = t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
25 Mar (84)	0 Sat.	3 29 15	20 Mar (79)	2 Mon	214 1755	4196
25 Mar (84)	1 Sun	9 41 24	9 Mar (68)	6 Fri	89 8983	4197
24 Mar (84)	2 Mon	15 53 33	27 Feb (58)	4 Wed.	304 2531	4198
24 Mar (83)	3 Tues	22 5 42	16 Mar (75)	2 Mon.	0 8035	4199
25 Mar (84)	5 Thur	4 17 51	6 Mar (65)	0 Sat.	214 6584	4200
25 Mar (84)	6 Fri	10 30 0	25 Mar (84)	6 Fri	249 3408	4201
24 Mar (84)	0 Sat.	16 42 9	13 Mar (73)	3 Tues	125 0687	4202
24 Mar (83)	1 Sun	22 54 18	2 Mar (61)	0 Sat.	0 7865	4203
25 Mar (84)	3 Tues	5 6 27	21 Mar (80)	6 Fri	35 4689	4204
25 Mar (84)	4 Wed	11 18 36	11 Mar (70)	4 Wed.	249 8237	4205
24 Mar (84)	5 Thur	17 30 45	28 Feb (59)	1 Sun.	125 5466	4206
24 Mar (83)	6 Fri	23 42 54	18 Mar. (77)	0 Sat.	160 2289	4207
25 Mar (84)	1 Sun	5 55 3	7 Mar. (66)	4 Wed	35 9518	4208
25 Mar (84)	2 Mon	12 7 12	25 Feb (56)	2 Mon	250 3066	4209
24 Mar (84)	3 Tues	18 19 21	15 Mar. (75)	1 Sun.	284 9889	4210
25 Mar (84)	5 Thur	0 31 30	4 Mar (68)	5 Thur	160 7118	4211
25 Mar (84)	6 Fri	6 43 39	23 Mar (82)	4 Wed.	195 3942	4212
25 Mar (84)	0 Sat.	12 55 48	12 Mar (71)	1 Sun	71 1171	4213
24 Mar (84)	1 Sun	19 7 57	1 Mar (61)	6 Fri.	285 4718	4214
25 Mar (84)	3 Tues	1 20 6	20 Mar (79)	5 Thur	320 1543	4215
25 Mar. (84)	4 Wed	7 32 15	9 Mar (68)	2 Mon	195 8771	4216
25 Mar (84)	5 Thur	13 44 24	26 Feb (57)	6 Fri.	71 5999	4217
24 Mar (84)	6 Fri	19 56 33	16 Mar (76)	5 Thur	106 2823	4218
25 Mar. (84)	1 Sun	2 8 42	6 Mar (65)	3 Tues	320 6872	4219
25 Mar (84)	2 Mon	8 20 51	24 Mar. (83)	1 Sun	16 6876	4220

						CONCURRENT YEAR.		
							Jovian Saṁvatsara		Mean intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A.D	Southern system	Northern system	
1	2	8	8a	4	5	6	7	8a
4221	1042	1177	526	294-95	1119-20	33 Vikārin	36 Śubhakṛit	..
4222	1043	1178	527	295 96	*1120 21	34 Śārvarin	37 Śōbhana	8 Kārttika
4223	1044	1179	528	296-97	1121-22	35 Plava	38 Krōdhin	...
4224	1045	1180	529	297-98	1122-23	36 Śubhakṛit	39 Viśvāvasu	.
4225	1046	1181	530	298-99	1123-24	37 Śōbhana	40 Parābhava	5 Srāvana
4226	1047	1182	531	299-300	*1124-25	38 Krōdhin .	41 Plavanga	...
4227	1048	1183	532	300-01	1125-26	39 Viśvāvasu	42 Kīlaka	.
4228	1049	1184	533	301-02	1126-27	40 Parābhava	43 Saumya	2 Vaiśākha
4229	1050	1185	534	302-03	1127-28	41 Plavanga	44 Sādhārana	
4230	1051	1186	535	303-04	*1128-29	42 Kīlaka .	45 Virōdhakṛit	10 Pausha
4231	1052	1187	536	304-05	1129-30	43 Saumya	46 Paridhāvin	...
4232	1053	1188	537	305-06	1130-31	44 Sādhārana	47 Pramādin	.
4233	1054	1189	538	306-07	1131-32	45 Virōdhakṛit	48 Ānanda .	7 Āśvina
4234	1055	1190	539	307-08	*1132-33	46 Paridhāvin	49 Rākshasa	.
4235	1056	1191	540	308-09	1133-34	47 Pramādin	50 Anala .	
4236	1057	1192	541	309-10	1134-35	48 Ānanda .	51 Pingala .	3 Jyēshtha
4237	1058	1193	542	310-11	1135-36	49 Rākshasa.	52 Kālayukta	
4238	1059	1194	543	311-12	*1136-37	50 Anala .	53 Siddhārthin	12 Phālguna
4239	1060	1195	544	312-13	1137-38	51 Pingala	54 Raudra	...
4240	1061	1196	545	313-14	1138-39	52 Kālayukta	55 Durmati .	.
4241	1032	1197	546	314-15	1139-40	53 Siddhārthin	56 Dundubhi	8 Kārttika
4242	1063	1198	547	315-16	*1140-41	54 Raudra	57 Rudhirōdgārin	
4243	1064	1199	548	316-17	1141-42	55 Durmati	58 Raktāksha	
4244	1065	1200	549	317-18	1142-43	56 Dundubhi	59 Krōdhana	5 Srāvana
4245	1066	1201	550	318-19	1143-44	57 Rudhirōdgārin	60 Kshaya .	...

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COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and month, A.D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week-day	a (here = t, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
25 Mar (84) . .	3 Tues	14 33 0	14 Mar (73)	6 Fri .	231·0424	4221
24 Mar (84) .	4 Wed.	20 45 9	2 Mar (62) .	3 Tues	106·7652	4222
25 Mar. (84) .	6 Fri.	2 57 18	21 Mar (80)	2 Mon.	141·4477	4223
25 Mar (84) .	0 Sat.	9 9 27	10 Mar (69)	6 Fri	171704	4224
25 Mar (84)	1 Sun.	15 21 36	28 Feb (59)	4 Wed	231·5253	4225
24 Mar (84)	2 Mon .	21 33 45	18 Mar (78)	3 Tues.	266·2077	4226
25 Mar (84)	4 Wed.	3 45 54	7 Mar (66)	0 Sat.	141·9306	4227
25 Mar. (84)	5 Thurs	9 58 3	24 Feb (55)	4 Wed.	176538	4228
25 Mar (84)	6 Fri	16 10 12	15 Mar (74)	3 Tues.	52·3357	4229
24 Mar (84) .	0 Sat.	22 22 21	4 Mar (64)	1 Sun	266·6906	4230
25 Mar. (84)	2 Mon.	4 34 30	23 Mar. (82)	0 Sat. .	301·3729	4231
25 Mar (84)	3 Tues	10 46 30	12 Mar (71)	4 Wed. .	177·0958	4232
25 Mar (84) .	4 Wed.	16 58 48	1 Mar. (60)	1 Sun. .	52·8186	4233
24 Mar (84) .	5 Thurs.	23 10 57	19 Mar (79)	0 Sat	87·5011	4234
25 Mar (84)	0 Sat	5 23 6	9 Mar (68) .	5 Thurs	301·8558	4235
25 Mar (84)	1 Sun	11 35 15	26 Feb (57)	2 Mon	177 5767	4236
25 Mar (84)	2 Mon .	17 47 24	17 Mar (76)	1 Sun	212·2611	4237
24 Mar (84)	3 Tues .	23 59 33	5 Mar (65)	5 Thurs .	87·9849	4238
25 Mar. (84) .	5 Thurs	6 11 42	24 Mar (83) .	4 Wed	122·6663	4239
25 Mar (84)	6 Fri	12 23 51	18 Mar (72) .	1 Sun. .	9998 3892 §	4240
25 Mar (84)	0 Sat	18 36 0	3 Mar (62) .	6 Fri. .	212·7440	4241
25 Mar. (85)	2 Mon	0 48 9	21 Mar (81)	5 Thurs. .	247 4284	4242
25 Mar. (84)	3 Tues	7 0 18	10 Mar (69) .	2 Mon	123·0492	4243
25 Mar. (84)	4 Wed	13 12 27	27 Feb (58)	6 Fri.	9998·8721§	4244
25 Mar (84)	5 Thurs	19 24 36	18 Mar (77)	5 Thurs.	33 5545	4245

§ Chaitra sukla 1 was suppressed.

| | | | | | | JOVIAN SAṀVATSARA | | |
Kali.	Śaka.	Chaitrādi Vikrama.	Meshādi solar year in Bengal.	Kollam	A.D.	Southern system	Northern system	Mean inter-calated (adhika) lunar month.
1	**2**	**3**	**3a**	**4**	**5**	**6**	**7**	**8a**
4246	1067	1202	551	319-20	*1144-45	58 Raktāksha	1 Prabhava	...
4247	1068	1203	552	320-21	1145-46	59 Krōdhana	2 Vibhava	1 Chaitra
4248	1069	1204	553	321-22	1146-47	60 Kshaya	3 Śukla	
4249	1070	1205	554	322-23	1147-48	1 Prabhava	4 Pramōda	10 Pausha
4250	1071	1206	555	323-24	*1148-49	2 Vibhava	5 Prajāpati	..
4251	1072	1207	556	324-25	1149-50	3 Śukla	6 Angiras	...
4252	1073	1208	557	325-26	1150-51	4 Pramōda	7 Śrīmukha	6 Bhādrapada
4253	1074	1209	558	326-27	1151-52	5 Prajāpati	8 Bhāva	..
4254	1075	1210	559	327-28	*1152-53	6 Angiras	9 Yuvan	.
4255	1076	1211	560	328-29	1153-54	7 Śrīmukha	10 Dhātṛi	3 Jyēshtha
4256	1077	1212	561	329-30	1154-55	8 Bhāva	11 Īśvara	..
4257	1078	1213	562	330-31	1155 56	9 Yuvan	12 Bahudhānya	11 Māgha
4258	1079	1214	563	331-32	*1156-57	10 Dhātṛi	13 Pramāthin	..
4259	1080	1215	564	332-33	1157-58	11 Īśvara	14 Vikrama	.
4260	1081	1216	565	333-34	1158-59	12 Bahudhānya	15 Vṛisha	8 Kārttika
4261	1082	1217	566	334-35	1159-60	13 Pramāthin	16 Chitrabhānuf	.
4262	1083	1218	567	335-36	*1160-61	14 Vikrama	18 *Tārana*	..
4263	1084	1219	568	336-37	1161-62	15 Vṛisha	19 *Pārthiva*	5 Śrāvana
4264	1085	1220	569	337-38	1162-63	16 Chitrabhānu	20 *Vyaya*	..
4265	1086	1221	570	338 39	1163 64	17 Subhānu	21 *Sarvajit*	...
4266	1087	1222	571	339-40	*1164-65	18 Tāraṇa	22 *Sarvadhārin*	1 Chaitra
4267	1088	1223	572	340-41	1165-66	19 Pārthiva	23 Virōdhin	.
4268	1089	1224	573	341-42	1166-67	20 Vyaya	24 Vikṛita	10 Pausha
4269	1090	1225	574	342-43	1167-68	21 Sarvajit	25 Khara	...
4270	1091	1226	575	343-44	*1168-69	22 Sarvadhārin	26 Nandana	.

† 17 Subhānu was suppressed in the north by the *Brahma-Siddhānta*, both in true and mean reckoning

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COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week day	a (here $= t$, the index of the tithi)	
13	14	17	19	20	23	1
		H. M S				
25 Mar. (85)	0 Sat.	1 36 45	7 Mar (67)	3 Tues.	247·9093	4246
25 Mar. (84)	1 Sun	7 48 54	24 Feb (55)	0 Sat.	123·6821	4247
25 Mar (84)	2 Mon	14 1 3	15 Mar (74)	6 Fri.	158·3145	4248
25 Mar (84)	8 Tues	20 13 12	4 Mar (63)	3 Tues.	34·0373	4249
25 Mar (85)	5 Thurs.	2 25 21	22 Mar (82)	2 Mon	68·7197	4250
25 Mar (84)	6 Fri.	8 37 30	12 Mar (71)	0 Sat.	283·0740	4251
25 Mar. (84)	0 Sat.	14 49 39	1 Mar. (60)	4 Wed.	158·7974	4252
25 Mar. (84)	1 Sun	21 1 48	20 Mar. (79)	3 Tues.	193·4798	4253
25 Mar (85)	3 Tues.	3 13 57	8 Mar (68)	0 Sat.	69·2026	4254
25 Mar (84)	4 Wed.	9 26 6	26 Feb (57)	5 Thur	283·5575	4255
25 Mar. (84)	5 Thur	15 38 15	17 Mar (70)	4 Wed	318·2398	4256
25 Mar. (84)	6 Fri	21 50 24	6 Mar (65)	1 Sun.	193·9627	4257
25 Mar (85)	1 Sun.	4 2 33	24 Mar (84)	0 Sat.	228·6451	4258
25 Mar. (84)	2 Mon	10 14 42	13 Mar (72)	4 Wed.	104·3680	4259
25 Mar. (84)	3 Tues	16 26 51	3 Mar. (62)	2 Mon.	318·7227	4260
25 Mar. (84)	4 Wed.	22 39 0	21 Mar (80)	0 Sat.	14·7731	4261
25 Mar (85)	6 Fri.	4 51 9	10 Mar. (70)	5 Thur	229·1280	4262
25 Mar (84)	0 Sat.	11 3 18	27 Feb (58)	2 Mon	104·8508	4263
25 Mar (84)	1 Sun.	17 15 27	18 Mar (77)	1 Sun.	189·5882	4264
25 Mar (84)	2 Mon	23 27 36	7 Mar. (66)	5 Thur.	15·2561	4265
25 Mar. (85)	4 Wed	5 39 45	25 Feb (56)	3 Tues	229·6109	4266
25 Mar. (84)	5 Thur.	11 51 54	15 Mar (74)	2 Mon.	264·2932	4267
25 Mar. (84)	6 Fri.	18 4 3	4 Mar. (63)	6 Fri.	140·0161	4268
26 Mar. (85)	1 Sun	0 16 12	23 Mar (82)	5 Thur	174·6985	4269
25 Mar. (85)	2 Mon.	6 28 21	11 Mar. (71)	2 Mon.	50·4123	4270

TABLE

						JOVIAN SAMVATSARA.		
					CONCURRENT YEAR.			Mean inte-calated (*adhika*) lunar month
Kali.	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4271	1092	1227	576	344-45	1169-70	23 Virōdhin .	27 Vijaya .	6 Bhādrapada .
4272	1093	1228	577	345-46	1170-71	24 Vikrita	28 Jaya .	
4273	1094	1229	578	346 47	1171-72	25 Khara	29 Manmatha	
4274	1095	1230	579	347-48	*1172-73	26 Nandana .	30 Durmukha .	3 Jyēshṭha
4275	1096	1231	580	348-49	1173-74	27 Vijaya .	31 Hēmalamba .	
4276	1097	1232	581	349-50	1174-75	28 Jaya .	32 Vilamba .	11 Māgha .
4277	1098	1233	582	350-51	1175-76	29 Manmatha .	33 Vikārin . .	...
4278	1099	1234	583	351-52	*1176-77	30 Durmukha .	34 Śārvarin	
4279	1100	1235	584	352-53	1177-78	31 Hēmalamba	35 Plava . .	8 Kārttika .
4280	1101	1236	585	353-54	1178-79	32 Vilamba	36 Śubhakṛit	
4281	1102	1237	586	354 55	1179-80	33 Vikārin	37 Śōbhana	
4282	1103	1238	587	355-56	*1180-81	34 Śārvarin	38 Krōdhin .	4 Āshādha
4283	1104	1239	588	356-57	1181-82	35 Plava .	39 Viśvāvasu .	...
4284	1105	1240	589	357-58	1182-83	36 Śubhakṛit	40 Parābhava .	
4285	1106	1241	590	358-59	1183-84	37 Śōbhana . .	41 Plavanga .	1 Chaitra .
4286	1107	1242	591	359-60	*1184-85	38 Krōdhin	42 Kīlaka . .	
4287	1108	1243	592	360-61	1185-86	39 Viśvāvasu .	43 Saumya .	9 Mārgaśira .
4288	1109	1244	593	361-62	1186-87	40 Parābhava	44 Sādhārana	.
4289	1110	1245	594	362-63	1187-88	41 Plavanga .	45 Virōdhakṛit .	...
4290	1111	1246	595	363-64	*1188-89	42 Kīlaka . .	46 Paridhāvin .	6 Bhādrapada .
4291	1112	1247	596	364-65	1189-90	43 Saumya . .	47 Pramādin .	...
4292	1113	1248	597	365-66	1190-91	44 Sādhārana .	48 Ānanda .	.
4293	1114	1249	598	366-67	1191-92	45 Virōdhakṛit .	49 Rākshasa .	2 Vaiśākha .
4294	1115	1250	599	367-68	*1192-93	46 Paridhāvin .	50 Anala .	...
4295	1116	1251	600	368-69	1193-94	47 Pramādin .	51 Pingala . .	11 Māgha .

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COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS).			Kali
Day and month, A D	Week day	Time of mean Mēsha-saṁkrānti	Day and month, A D	Week-day	a (here = t, the index of the tithi)	
13	14	17	19	20	28	1
		H M S				
25 Mar (84) . .	3 Tues	12 40 80	1 Mar (60)	0 Sat	264 7782	4271
25 Mar (84) .	4 Wed . .	18 52 89	20 Mar (79) .	6 Fri	290 4586	4272
26 Mar (85) .	6 Fri	1 4 48	9 Mar (68)	3 Tues	175 1815	4273
25 Mar (85) .	0 Sat.	7 16 57	26 Feb (57)	0 Sat .	50 9042	4274
25 Mar (84) .	1 Sun	13 29 6	16 Mar (75)	6 Fri	85 5866	4275
25 Mar (84) .	2 Mon	19 41 15	6 Mar (65)	4 Wed .	299 0415	4276
26 Mar (85) .	4 Wed	1 53 24	24 Mar (88)	2 Mon	9995 9918 §	4277
25 Mar (85) .	5 Thur	8 5 33	13 Mar (73)	0 Sat.	210 3467	4278
25 Mar (84) .	6 Fri	14 17 42	2 Mar (61)	4 Wed	86 0695	4279
25 Mar. (84) . .	0 Sat.	20 29 51	21 Mar (80)	3 Tues	120·7519	4280
26 Mar (85)	2 Mon	2 42 0	10 Mar. (69)	0 Sat.	9996 4747 §	4281
25 Mar (85) .	3 Tues	8 54 9	28 Feb (59) .	5 Thur	210 8296	4282
25 Mar (84) . .	4 Wed	15 6 18	18 Mar (77)	4 Wed.	245 5120	4283
25 Mar. (84) .	5 Thur	21 18 27	7 Mar (66)	1 Sun	121 2349	4284
26 Mar. (85)	0 Sat	3 30 36	24 Feb (55) .	5 Thur.	9996 9576 §	4285
25 Mar (85) . .	1 Sun	9 42 45	14 Mar. (74)	4 Wed .	81 0400	4286
25 Mar. (84) .	2 Mon	15 54 54	4 Mar (63)	2 Mon	245·9949	4287
25 Mar (84) . .	3 Tues	22 7 3	23 Mar (82)	1 Sun .	280 6772	4288
26 Mar (85) .	5 Thur	4 19 12	12 Mar (71)	5 Thur	156 4001	4289
25 Mar (85) .	6 Fri	10 31 21	29 Feb (60)	2 Mon	32 1230	4290
25 Mar. (84) . .	0 Sat	16 43 30	19 Mar (78) .	1 Sun. .	66·8054	4291
25 Mar. (84) . .	1 Sun	22 55 39	9 Mar (68) .	6 Fri · .	281 1602	4292
26 Mar. (85)	3 Tues .	5 7 48	26 Feb (57)	3 Tues	156 8830	4293
25 Mar (85) . .	4 Wed.	11 19 57	16 Mar (76) .	2 Mon .	191 5854	4294
25 Mar. (84) . .	5 Thur	17 ·32 6	5 Mar (64) .	6 Fri.	67 2882	4295

§ Chaitra śukla 1 was suppressed

TABLE

				CONCURRENT YEAR				
						JOVIAN SAṀVATSARA.		Mean intercalated (*adhika*) lunar month.
Kali.	Śaka.	Chaitādi Vikrama.	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	8	3a	4	5	6	7	8a
4296	1117	1252	601	369-70	1194-95	48 Ânanda	52 Kâlayukta	
4297	1118	1253	602	370-71	1195-96	49 Râkshasa	53 Siddhâ-thin	.
4298	1119	1254	603	371-72	*1196-97	50 Anala	54 Raudra	8 Kârttika ‡
4299	1120	1255	604	372-73	1197-98	51 Pingala	55 Durmati	..
4300	1121	1256	605	373 74	1198-99	52 Kâlayukta	56 Dundubhi	
4301	1122	1257	606	374-75	1199-1200	53 Siddhârthin	57 Rudhirôdgârin	4 Âshâdha .
4302	1123	1258	607	375 76	*1200-01	54 Raudra	58 Raktâksha	.
4303	1124	1259	608	376-77	1201-02	55 Durmati	59 Krôdhana	
4304	1125	1260	609	377-78	1202-03	56 Dundubhi	60 Kshaya	1 Chaitra
4305	1126	1261	610	378-79	1203 04	57 Rudhirôdgârin	1 Prabhava	
4306	1127	1262	611	379-80	*1204-05	58 Raktâksha	2 Vibhava	9 Mârgaśira
4307	1128	1263	612	380-81	1205-06	59 Krôdhana .	3 Sukla . .	...
4308	1129	1264	613	381-82	1206-07	60 Kshaya .	4 Pramôda	...
4309	1120	1265	614	382-83	1207-08	1 Prabhava .	5 Prajâpati	6 Bhâdrapada
4310	1131	1266	615	383-84	*1208-09	2 Vibhava .	6 Angiras	.
4311	1132	1267	616	384-85	1209-10	3 Śukla	7 Śrîmukha	..
4312	1133	1268	617	385-86	1210-11	4 Pramôda .	8 Bhâva	2 Vaiśâkha
4313	1134	1269	618	386-87	1211-12	5 Prajâpati	9 Yuvan	...
4314	1135	1270	619	387-88	*1212-13	6 Angiras . .	10 Dhâtri .	11 Mâgha
4315	1136	1271	620	388-89	1213-14	7 Śrîmukha	11 Iśvara	
4316	1137	1272	621	389-90	1214-15	8 Bhâva . .	12 Bahudhânya	.
4317	1138	1273	622	390 91	1215-16	9 Yuvan	13 Pramâthin .	7 Âśvina .
4318	1139	1274	623	391-92	*1216-17	10 Dhâtri .	14 Vikrama	..
4319	1140	1275	624	392-93	1217-18	11 Iśvara .	15 Vrisha .	..
4320	1141	1276	625	393-94	1218-19	12 Bahudhânya	16 Chitrabhânu .	4 Ashâdha

‡ See "Roma ka." p. 215 above.

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COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A. D.	Week-day.	*a* (here = *t*, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
25 Mar. (84) .	6 Fri.	23 44 15	24 Mar (83) .	5 Thur.	101 9706	4296
26 Mar (85) .	1 Sun	5 56 24	14 Mar. (73)	3 Tues .	316 3255	4297
25 Mar (85) .	2 Mon	12 8 33	2 Mar (62)	0 Sat. .	192 0482	4298
25 Mar (84) .	3 Tues	18 20 42	21 Mar (80)	6 Fri.	226 7307	4299
26 Mar (85) .	5 Thur	0 32 51	10 Mar (69)	3 Tues.	102 4535	4300
26 Mar (85) .	6 Fri .	6 45 0	28 Feb. (59) .	1 Sun	316 8083	4301
25 Mar. (85)	0 Sat.	12 57 9	17 Mar. (77)	6 Fri	12 8587	4302
25 Mar (84) .	1 Sun	19 9 18	7 Mar (66)	4 Wed	227 2156	4303
26 Mar. (85) .	3 Tues	1 21 27	24 Feb (55) .	1 Sun. .	102 9363	4304
26 Mar (85)	4 Wed	7 33 36	15 Mar (74) .	0 Sat. .	137 6188	4305
25 Mar. (85) .	5 Thur.	13 45 45	8 Mar. (68)	4 Wed.	13 3416	4306
25 Mar. (84) .	6 Fri .	19 57 54	22 Mar (81)	3 Tues .	48 0239	4307
26 Mar (85)	1 Sun	2 10 3	12 Mar (71)	1 Sun	262 3788	4308
26 Mar (85) .	2 Mon. .	8 22 12	1 Mar. (60) .	5 Thur	188 1017	4309
25 Mar (85) .	3 Tues .	14 34 21	19 Mar (79)	4 Wed.	172 7840	4310
25 Mar. (84) .	4 Wed	20 46 30	8 Mar. (67) .	1 Sun.	48 5069	4311
26 Mar (85) .	6 Fri	2 58 39	26 Feb (57)	6 Fri .	262 8617	4312
26 Mar. (85) .	0 Sat. .	9 10 48	17 Mar (76)	5 Thur.	297 5441	4313
25 Mar (85) .	1 Sun	15 22 57	5 Mar (65)	2 Mon. .	173 2669	4314
25 Mar (84) .	2 Mon	21 35 6	24 Mar (83) .	1 Sun.	207 9493	4315
26 Mar (85) .	4 Wed. .	3 47 15	13 Mar (72) .	5 Thur.	83 6722	4316
26 Mar (85) .	5 Thur	9 59 24	3 Mar. (62) .	3 Tues. .	298 0269	4317
25 Mar (85) .	6 Fri .	16 11 33	21 Mar (81) .	2 Mon	332 7094	4318
25 Mar (84) .	0 Sat. .	22 23 42	10 Mar (69)	6 Fri. .	203 4322	4319
26 Mar (85) .	2 Mon. .	4 35 51	27 Feb (58) .	3 Tues. .	84 1551	4320

TABLE

						CONCURRENT YEAR		
							Jovian Samvatsara		Mean intercalated (adhika) lunar month
Kali.	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam	A.D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4321	1142	1277	626	394-95	1219-20	18 Pramāthin	17 Subhānu	..
4322	1143	1278	627	395-96	*1220-21	14 Vikrama	18 Tārana	12 Phālguna
4323	1144	1279	628	396-97	1221-22	15 Vrisha	19 Pā thiva	..
4324	1145	1280	629	297-98	1222-23	16 Chit-abhānu	20 Vyaya	.
4325	1146	1281	630	398 99	1223-24	17 Subhānu	21 Sarvajit	9 Mārgaśira
4326	1147	1282	631	399-400	*1224-25	18 Tārana	22 Sarvadhārin	..
4327	1148	1283	632	400-01	1225 26	19 Pārthiva	23 Virōdhin	..
4328	1149	1284	633	401-02	1226-27	20 Vyaya	24 Vikrita	5 Śrāvana
4329	1150	1285	634	402-03	1227-28	21 Sarvajit	25 Khara	..
4330	1151	1286	635	403 04	*1228-29	22 Sarvadhārin	26 Nandana	
4331	1152	1287	636	404-05	1229-30	23 Virōdhin	27 Vijaya	2 Vaiśākha
4332	1153	1288	637	405-06	1230-31	24 Vikrita	28 Jaya	..
4333	1154	1289	638	406 07	1231 32	25 Khara	29 Manmatha	10 Pausha
4334	1155	1290	639	407-08	*1232-33	26 Nandana	30 Durmukha	..
4335	1156	1291	640	408-09	1233-34	27 Vijaya	31 Hēmalamba	...
4336	1157	1292	641	409-10	1234-35	28 Jaya	32 Vilamba	7 Āśvina
4337	1158	1293	642	410-11	1235 36	29 Manmatha	33 Vikārin	..
4338	1159	1294	643	411-12	*1236-37	30 Durmukha	34 Sārvarin	...
4339	1160	1295	644	412-13	1237-38	31 Hēmalamba	35 Plava	4 Āshādha
4340	1161	1296	645	413-14	1238 39	32 Vilamba	36 Śubhakrit	.
4341	1162	1297	646	414-15	1239-40	33 Vikārin	37 Śōbhana	12 Phālguna
4342	1163	1298	647	415-16	*1240-41	34 Sārvarin	38 Krōdhin	...
4343	1164	1299	648	416-17	1241-42	35 Plava	39 Viśvāvasu	...
4344	1165	1300	649	417-18	1242-43	36 Śubhakrit	40 Parābhava	9 Mārgaśira
4345	1166	1301	650	418-19	1243-44	37 Śōbhana	41 Plavanga	..

XC—contd.

COMMENCEMENT OF THE						
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A.D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A D	Week-day	a (here = t, the index of the tithi)	
13	14	17	19	20	28	1
		H M S				
26 Mar. (85) .	3 Tues .	10 48 0	18 Mar (77)	2 Mon	118 8374	4321
25 Mar (85)	4 Wed.	17 0 9	7 Mar (67)	0 Sat.	333 1923	4322
25 Mar (84) .	5 Thur.	23 12 18	25 Mar (84)	5 Thur	29 2427	4323
26 Mar (85) .	0 Sat.	5 24 27	15 Mar (74)	3 Tues	243 5975	4324
26 Mar. (85)	1 Sun	11 36 36	4 Mar (63)	0 Sat	119 3203	4325
25 Mar (85) .	2 Mon.	17 48 45	22 Mar. (82)	6 Fri	154 0027	4326
26 Mar (85) .	4 Wed	0 0 54	11 Mar (70)	3 Tues	29 7256	4327
26 Mar. (85) .	5 Thur	6 13 3	1 Mar (60)	1 Sun	244 0804	4328
26 Mar (85)	6 Fri .	12 25 12	20 Mar (79) .	0 Sat.	278·7628	4329
25 Mar (85)	0 Sat	18 37 21	8 Mar (68)	4 Wed	154 4857	4330
26 Mar (85) . .	2 Mon	0 49 30	25 Feb (56) .	1 Sun .	30·2084	4331
26 Mar (85) . .	3 Tues	7 1 39	16 Mar (75) .	0 Sat. .	64 8908	4332
26 Mar (85) . .	4 Wed.	13 13 48	6 Mar. (65)	5-Thur	279·2457	4333
25 Mar (85) . .	5 Thur	19 25 57	24 Mar (84)	4 Wed.	313·9281	4334
26 Mar (85) . .	0 Sat	1 38 6	13 Mar (72)	1 Sun .	189 6509	4335
26 Mar (85) . .	1 Sun	7 50 15	2 Mar (61)	5 Thur	65 3788	4336
26 Mar (85) .	2 Mon	14 2 24	21 Mar (80) .	4 Wed	100·0562	4337
25 Mar (85) . .	3 Tues	20 14 33	10 Mar (70) .	2 Mon .	314 4110	4338
26 Mar (85) . .	5 Thur	2 26 42	27 Feb (58)	6 Fri	190 1338	4339
26 Mar (85) . .	6 Fri	8 38 51	18 Mar. (77)	5 Thur .	224 8162	4340
26 Mar (85) . .	0 Sat	14 51 0	7 Mar (66)	2 Mon .	100 5391	4341
25 Mar (85) . .	1 Sun	21 3 9	25 Mar (85) .	1 Sun	135 2214	4342
26 Mar (85) . .	3 Tues.	3 15 18	14 Mar (73) .	5 Thur .	10·9443	4343
26 Mar (85) . .	4 Wed	9 27 27	4 Mar (63) .	3 Tues .	225 2991	4344
26 Mar. (85) . .	5 Thur .	15 39 36	23 Mar (82)	2 Mon .	259 9815	4345

TABLE

						JOVIAN SAMVATSARA		Mean intercalated (adhika) lunar month.
CONCURRENT YEAR								
Kali.	Śaka.	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam	A.D.	Southern system.	Northern system	
1	2	3	3a	4	5	6	7	8a
4346	1167	1302	651	419-20	*1244-45	38 Krōdhin	42 Kīlaka†	...
4347	1168	1303	652	420 21	1245-46	39 Viśvāvasu	44 Sādhārana	5 Śrāvana
4348	1169	1304	653	421-22	1246-47	40 Parābhava	45 Virōdhakrit	...
4349	1170	1305	654	422-23	1247-48	41 Plavanga	46 Paridhārin	...
4350	1171	1306	655	423-24	*1248-49	42 Kīlaka	47 Pramādin	2 Vaiśākha
4351	1172	1307	656	424-25	1249-50	43 Saumya	48 Ānanda	..
4352	1173	1308	657	425-26	1250-51	44 Sādhārana	49 Rākshasa	10 Pausha
4353	1174	1309	658	426-27	1251-52	45 Virōdhakrit	50 Anala	..
4354	1175	1310	659	427-28	*1252-53	46 Paridhāvin	51 Pingala	..
4355	1176	1311	660	428-29	1253-54	47 Pramādin	52 Kālayukta	7 Āśvina
4356	1177	1312	661	429-30	1254-55	48 Ānanda	53 Siddhārthin	...
4357	1178	1313	662	430-31	1255-56	49 Rākshasa	54 Raudra	..
4358	1179	1314	663	431-32	*1256-57	50 Anala	55 Durmati	3 Jyēshtha
4359	1180	1315	664	432-33	1257-58	51 Pingala	56 Dundubhi	
4360	1181	1316	665	433-34	1258 59	52 Kālayukta	57 Rudhirōdgārin	12 Phālguna
4361	1182	1317	666	434-35	1259-60	53 Siddhārthin	58 Raktāksha	...
4362	1183	1318	667	435-36	*1260-61	54 Raudra	59 Krōdhana	.
4363	1184	1319	668	436-37	1261-62	55 Durmati	60 Kshaya	8 Kārttika
4364	1185	1320	669	437-38	1262-63	56 Dundubhi	1 Prabhava	..
4365	1186	1321	670	438-39	1263-64	57 Rudhirōdgārin	2 Vibhava	...
4366	1187	1322	671	439-40	*1264-65	58 Raktāksha	3 Śukla	5 Śrāvana
4367	1188	1323	672	440-41	1265-66	59 Krōdhana	4 Pramōda	..
4368	1189	1324	673	441-42	1266-67	60 Kshaya	5 Prajāpati	...
4369	1190	1325	674	442-43	1267-68	1 Prabhava	6 Angiras	1 Chaitra
4370	1191	1325	675	443-44	*1268-69	2 Vibhava	7 Śrīmukha	...

† 43 Saumya was suppressed in the north by the mean system. By the "true" system K Y 4346 (expired), A.D 1245-46, was called "Saumya," 44 Sādhāraṇa being suppressed. The next year was 45 Virōdhakrit by both systems of reckoning

XC—contd

COMMENCEMENT OF THE						Kal.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D.	Week-day.	Time of mean Mêsha-sankrānti.	Day and month, A.D	Week-day	a (here=t, the index of the tithi)	
13	14	17	19	20	23	1
		H. M S				
25 Mar. (85) . .	6 Fri. .	21 51 45	11 Mar (71) .	6 Fri	135 7043	4346
26 Mar (85) . .	1 Sun .	4 3 54	28 Feb (59) ' .	3 Tues	11 4272	4347
26 Mar. (85) . .	2 Mon .	10 16 3	19 Mar (78) .	2 Mon .	46 1096	4348
26 Mar. (85) . .	3 Tues .	16 28 12	9 Mar (68) .	0 Sat .	260 4844	4349
26 Mar (85) . .	4 Wed .	22 40 21	26 Feb (57) .	4 Wed .	186 1872	4350
26 Mar (85) . .	6 Fri .	4 52 30	16 Mar (75) .	3 Tues .	170 8698	4351
26 Mar (85) . .	0 Sat. .	11 4 39	5 Mar (64) .	0 Sat. .	46 5925	4352
26 Mar. (85) . .	1 Sun .	17 16 48	24 Mar (83) .	6 Fri .	81 2748	4353
25 Mar (85) . .	2 Mon .	23 28 57	13 Mar (72) .	4 Wed .	295 3297	4354
26 Mar. (85) . .	4 Wed .	5 41 6	2 Mar (61) .	1 Sun .	171 3526	4355
26 Mar (85) . .	5 Thur. .	11 53 15	21 Mar (80) .	0 Sat .	206 0349	4356
26 Mar (85) . .	6 Fri .	18 5 24	10 Mar (69) .	4 Wed .	81 7577	4357
26 Mar. (86) . .	1 Sun. .	0 17 33	28 Feb (59) .	2 Mon .	296 1126	4358
26 Mar. (85) .	2 Mon .	6 29 42	18 Mar. (77) .	1 Sun .	330 7950	4359
26 Mar (85) . .	3 Tues .	12 41 51	7 Mar (66) .	5 Thur .	206 5178	4360
26 Mar. (85) . .	4 Wed. .	18 54 0	26 Mar. (85) .	4 Wed .	241 2002	4361
26 Mar. (86) .	6 Fri. .	1 6 9	14 Mar (74) .	1 Sun .	116 9231	4362
26 Mar (85) . .	0 Sat .	7 18 18	4 Mar (63) .	6 Fri .	331 2778	4363
26 Mar. (85) . .	1 Sun. .	13 30 27	22 Mar (81) .	4 Wed .	27 3283	4364
26 Mar (85) . .	2 Mon. .	19 42 36	12 Mar (71) .	2 Mon .	241 8831	4365
26 Mar. (86) .	4 Wed. .	1 54 45	29 Feb. (60) .	6 Fri. .	117 4060	4366
26 Mar. (85) . .	5 Thur. .	8 6 54	19 Mar (78) .	5 Thur .	152 0883	4367
26 Mar (85) . .	6 Fri. .	14 19 3	8 Mar (67) .	2 Mon .	27 8112	4368
26 Mar (85) . .	0 Sat. .	20 31 12	26 Feb (57) .	0 Sat .	242 1660	4369
26 Mar (86) . .	2 Mon. .	2 43 21	16 Mar (76) .	6 Fri. .	276 8483	4370

TABLE

						CONCURRENT YEAR		
							JOVIAN SAMVATSARA		Mean Intercalated (adhika) lunar month
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A.D.	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4371	1192	1327	676	444-45	1269-70	3 Śukla	8 Bhāva .	10 Pausha .
4372	1193	1328	677	445-46	1270-71	4 Pramōda .	9 Yuvan . .	
4373	1194	1329	678	446-47	1271-72	5 Prajāpati .	10 Dhātṛi . .	...
4374	1195	1330	679	447-48	*1272-73	6 Aṅgiras	11 Iśvara .	7 Āśvina .
4375	1196	1331	680	448-49	1273-74	7 Śrīmukha .	12 B-hudhānya	.
4376	1197	1332	681	449-50	1274-75	8 Bhāva .	13 Pramāthin .	...
4377	1198	1333	682	450-51	1275-76	9 Yuvan	14 Vikrama .	3 Jyēshtha .
4378	1199	1334	683	451-52	*1276-77	10 Dhātṛi	15 Vrisha .	
4379	1200	1335	684	452-53	1277-78	11 Iśvara . .	16 Chitrabhānu	12 Phālguna .
4380	1201	1336	685	453-54	1278-79	12 Bahudhānya .	17 Subhānu	.
4381	1202	1337	686	454-55	1279-80	13 Pramāthin	18 Tārana . .	..
4382	1203	1338	687	455-56	*1280-81	14 Vikrama .	19 Pārthiva .	8 Kārttika .
4383	1204	1339	688	456-57	1281-82	15 Vrisha .	20 Vyaya .	...
4384	1205	1340	689	457-58	1282-83	16 Chitrabhānu	21 Sarvajit .	.
4385	1206	1341	690	458-59	1283-84	17 Subhānu	22 Sarvadhārin .	5 Śrāvana .
4386	1207	1342	691	459-60	*1284-85	18 Tārana .	23 Virōdhin .	..
4387	1208	1343	692	460-61	1285-86	19 Pārthiva .	24 Vikrita	.
4388	1209	1344	693	461-62	1286-87	20 Vyaya .	25 Khara	1 Chaitra .
4389	1210	1345	694	462-63	1287-88	21 Sarvajit	26 Nandana	.
4390	1211	1346	695	463-64	*1288-89	22 Sarvadhārin	27 Vijaya .	10 Pausha .
4391	1212	1347	696	464-65	1289-90	23 Virōdhin .	28 Jaya .	.
4392	1213	1348	697	465-66	1290-91	24 Vikrita .	29 Manmatha	...
4393	1214	1349	698	466-67	1291-92	25 Khara .	30 Durmukha	6 Bhādrapada .
4394	1215	1350	699	467-68	*1292-93	26 Nandana	31 Hēmalamba .	...
4395	1216	1351	700	468-69	1293-94	27 Vijaya .	32 Vilamba	...

XC—contd

COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR.			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D	Week-day.	Time of mean Mesha-samkrānti	Day and month, A.D	Week day.	a (here = t, the index of the tithi)	
13	15	17	19	20	23	1
		H M S				
26 Mar (85)	3 Tues	8 55 30	5 Mar (64)	3 Tues	152 5712	4871
26 Mar (85)	4 Wed	15 7 39	24 Mar (83)	2 Mon	187 2586	4872
26 Mar (85)	5 Thur	21 19 48	13 Mar (72)	6 Fri	62 9765	4873
26 Mar (86)	0 Sat	3 31 57	2 Mar (62)	4 Wed	277 3913	4874
26 Mar. (85)	1 Sun	9 44 6	21 Mar (80)	3 Tues	312 0137	4875
26 Mar (85)	2 Mon.	15 56 15	10 Mar (69)	0 Sat.	187 7365	4876
26 Mar (85)	3 Tues.	22 8 24	27 Feb (58)	4 Wed.	63 4593	4877
26 Mar (86)	5 Thur	4 20 33	17 Mar (77)	3 Tues	98 1417	4878
26 Mar (85)	6 Fri	10 32 42	7 Mar (66)	1 Sun	312 4966	4879
26 Mar (85)	0 Sat.	16 44 51	25 Mar (84)	6 Fri.	8 5470	4880
26 Mar (85)	1 Sun	22 57 0	15 Mar (74)	4 Wed	222 9018	4881
26 Mar (86)	3 Tues	5 9 9	3 Mar (63)	1 Sun	98 6246	4882
26 Mar (85)	4 Wed.	11 21 18	22 Mar (81)	0 Sat	133 3071	4883
26 Mar. (85)	5 Thur	17 33 27	11 Mar (70)	4 Wed	9 0299	4884
26 Mar (85)	6 Fri	23 45 36	1 Mar (60)	2 Mon.	223 3847	4885
26 Mar. (86)	1 Sun	5 57 45	19 Mar (79)	1 Sun.	258 0671	4886
26 Mar (85)	2 Mon	12 9 54	8 Mar (67)	5 Thur	133 7900	4887
26 Mar (85)	3 Tues	18 22 3	25 Feb. (56)	2 Mon	9 5127	4888
27 Mar (86)	5 Thur	0 34 12	16 Mar (75)	1 Sun	44 1952	4889
26 Mar (86)	6 Fri.	6 46 21	5 Mar (65)	6 Fri	258 5500	4890
26 Mar (85)	0 Sat.	12 58 30	24 Mar (83)	5 Thur.	293 2324	4891
26 Mar (85)	1 Sun.	19 10 39	13 Mar (72)	2 Mon	168 9552	4892
27 Mar. (86)	3 Tues	1 22 48	2 Mar (61)	6 Fri.	44 6781	4893
26 Mar. (86)	4 Wed.	7 34 57	20 Mar (80)	5 Thur.	79 3605	4894
26 Mar. (85)	5 Thur.	13 47 6	10 Mar (69)	3 Tues	293·7152	4895

TABLE

			CONCURRENT YEAR					Mean intercalated (*adhika*) lunar month.
						JOVIAN SAṀVATSARA.		
Kali.	Saka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system.	Northern system.	
1	2	3	3a	4	5	6	7	8a
4396	1217	1352	701	469-70	1294-95	28 Jaya	33 Vikārin	3 Jyēshtha
4397	1218	1353	702	470-71	1295 96	29 Manmatha	34 Śārvarin	
4398	1219	1354	703	471-72	*1296 97	30 Durmukha	35 Plava	11 Māgha
4399	1220	1355	704	472-73	1297-98	31 Hēmalamba	36 Śubhakṛt	..
4400	1221	1356	705	473-74	1298-99	32 Vilamba	37 Śōbhana	..
4401	1222	1357	706	474-75	1299-1300	33 Vikārin	38 Krōdhin	8 Kārttika
4402	1223	1358	707	475-76	*1300-01	34 Śārvarin	39 Viśvāvasu	...
4403	1224	1359	708	476 77	1301-02	35 Plava	40 Parābhava	
4404	1225	1360	709	477-78	1302 03	36 Śubhakṛt	41 Plavanga	4 Āshādha
4405	1226	1361	710	478-79	1303-04	37 Śōbhana	42 Kīlaka	...
4406	1227	1362	711	479-80	*1304-05	38 Krōdhin	43 Saumya	
4407	1228	1363	712	480-81	1305-06	39 Viśvāvasu	44 Sādhārana	1 Chaitra
4408	1229	1364	713	481-82	1306-07	40 Parābhava	45 Virōdhakṛt	..
4409	1230	1365	714	482-83	1307-08	41 Plavanga	46 Paridhāvin	10 Pausha ‡
4410	1231	1366	715	483 84	*1308-09	42 Kīlaka	47 Pramādin	
4411	1232	1367	716	484-85	1309-10	43 Saumya	48 Ānanda	
4412	1233	1368	717	485-86	1310-11	44 Sādhārana	49 Rākshasa	6 Bhādrapada
4413	1234	1369	718	486-87	1311-12	45 Virōdhakṛt	50 Anala	
4414	1235	1370	719	487-88	*1312-13	46 Paridhāvin	51 Pingala	..
4415	1236	1371	720	488-89	1313-14	47 Pramādin	52 Kālayukta	8 Jyēshtha
4416	1237	1372	721	489 90	1314-15	48 Ānanda	53 Siddhārthin	...
4417	1238	1373	722	490-91	1315-16	49 Rākshasa	54 Raudra	11 Māgha
4418	1239	1374	723	491 92	*1316-17	50 Anala	55 Durmati	...
4419	1240	1375	724	492 93	1317-18	51 Pingala	56 Dundubhi	..
4420	1241	1376	725	493 94	1318-19	52 Kālayukta	57 Rudhirōdgārin	8 Kārttika

‡ See "Remarks," p 215, preceding this Table.

XC—*contd.*

COMMENCEMENT OF THE						Kali
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A.D	Week day	Time of mean Mesha-samkrānti	Day and month, A D	Week-day.	a (here $= t$, the index of the *tithi*)	
13	14	17	19	20	23	1
		H M S				
26 Mar (85) .	6 Fri	19 59 15	27 Feb (58) .	0 Sat	169 4381	4396
27 Mar (86) .	1 Sun .	2 11 24	18 Mar. (77) .	6 Fri .	204 1205	4397
26 Mar (86) .	2 Mon	8 23 33	6 Mar (66)	3 Tues	79 8493	4398
26 Mar (85) .	3 Tues .	14 35 42	25 Mar (84) .	2 Mon	114 5257	4399
26 Mar (85) . .	4 Wed	20 47 51	15 Mar (74)	0 Sat	328 8806	4400
27 Mar (86) . .	6 Fri .	3 0 0	4 Mar (63) .	4 Wed .	204 6034	4401
26 Mar (86)	0 Sat	9 12 9	22 Mar (82)	3 Tues .	239 2859	4402
26 Mar. (85)	1 Sun	15 24 18	11 Mar. (70)	0 Sat .	115 0087	4403
26 Mar (85)	2 Mon	21 36 27	1 Mar. (60) .	5 Thur .	329 3635	4404
27 Mar (86)	4 Wed .	3 48 36	19 Mar (78) .	3 Tues .	25 4189	4405
26 Mar (86)	5 Thur	10 0 45	8 Mar (68) .	1 Sun .	239 7688	4406
26 Mar (85)	6 Fri	16 12 54	25 Feb. (56)	5 Thur.	115 4915	4407
26 Mar. (85)	0 Sat.	22 25 3	16 Mar (75) .	4 Wed .	150 1739	4408
27 Mar (86)	2 Mon	4 37 12	5 Mar (64) .	1 Sun. .	25 8968	4409
26 Mar (86)	3 Tues .	10 49 21	23 Mar (83) .	0 Sat.	60 5791	4410
26 Mar. (85)	4 Wed .	17 1 30	13 Mar (72) .	5 Thur	274 9340	4411
26 Mar (85)	5 Thur .	23 13 39	2 Mar (61) .	2 Mon .	150 6569	4412
27 Mar (86) .	0 Sat.	5 25 48	21 Mar. (80) .	1 Sun	185 3993	4413
26 Mar (86)	1 Sun	11 37 57	9 Mar (69) .	5 Thur .	61 0621	4414
26 Mar (85)	2 Mon	17 50 6	27 Feb (58) .	3 Tues .	275 4169	4415
27 Mar (86) .	4 Wed.	0 2 15	18 Mar (77) .	2 Mon .	310 0993	4416
27 Mar (86)	5 Thur.	6 14 24	7 Mar. (66) .	6 Fri.	185 8221	4417
26 Mar. (86)	6 Fri.	12 26 33	25 Mar (85) .	5 Thur	220 5045	4418
26 Mar. (85) .	0 Sat. .	18 38 42	14 Mar (73) .	2 Mon .	96 2274	4419
27 Mar (86)	2 Mon	0 50 51	4 Mar (63) .	0 Sat .	310 5822	4420

						JOVIAN SAMVATSABA.		Mean intercalated (adhika) lunar month
Kali.	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal	Kollam.	A.D	Southern system	Northern system	
1	2	8	··	4	5	6	7	8a
4421	1242	1377	726	494-95	1319 20	53 Siddhârthin	58 Raktāksha	
4422	1243	1378	727	495-96	*1320-21	54 Raudra	59 Krōdhana	.
4423	1244	1379	728	496-97	1321-22	55 Durmati	60 Kshaya .	4 Āshādha .
4424	1245	1380	729	497 9C	1322-23	56 Dundubhi	1 Prabhava	...
4425	1246	1381	730	498-99	1328-24	57 Rudhirōdgārin	2 Vibhava	..
4426	1247	1382	731	499 500	*1324-25	58 Raktāksha	3 Śukla .	1 Chaitra .
4427	1248	1383	732	500-01	1325-26	59 Krōdhana	4 Pramōda	...
4428	1249	1384	733	501-02	1326 27	60 Kshaya	5 Prajāpati .	9 Mārgaśira .
4429	1250	1385	734	502-03	1327-28	1 Prabhava	6 Angiras .	.
4430	1251	1386	735	503-04	*1328-29	2 Vibhava	.7 Śrīmukha	..
4431	1252	1387	736	504-05	1329 30	3 Śukla .	8 Bhava†	6 Bhādrapada
4432	1253	1388	737	505-06	1330-31	4 Pramōda	10 Dhātṛi .	...
4433	1254	1389	738	506-07	1331-32	5 Prajāpati .	11 Īśvara .	...
4434	1255	1390	739	507-08	*1332-33	6 Angiras	12 Bahudhānya	2 Vaiśākha .
4435	1256	1391	740	508-09	1333 34	7 Srīmukha	13 Pramāthin .	..
4436	1257	1892	741	509-10	1334-35	8 Bhāva .	14 Vikrama	11 Mâgha
4437	1258	1393	742	510-11	1335-36	9 Yuvan	15 Vṛisha .	...
4438	1259	1394	743	511-12	*1336-37	10 Dhātṛi . .	16 Chitrabhānu	...
4439	1260	1395	744	512-13	1337-38	11 Īśvara .	17 Subhānu	7 Āśvina
4440	1261	1896	745	513-14	1338-39	12 Bahudhānya	18 Tārana .	.
4441	1262	1397	746	514-15	1339-40	13 Pramāthin	19 Pārthiva	.
4442	1283	1398	747	515-16	*1340-41	14 Vikrama .	20 Vyaya .	4 Āshādha .
4443	1264	1399	748	516-17	1341-42	15 Vṛisha	21 Sarvajit .	.
4444	1265	1400	749	517-18	1342-43	16 Chitrabhānu .	22 Sarvadhārin	12 Phālguna
4445	1266	1401	750	518-19	1343-44	17 Subhānu .	23 Virōdhin	.

† 2 Yuvan was suppressed in the north by the mean system. By the "true" system K Y 4431 (expired), A.D 1330-31. was called "Yuvan," and 10 Dhātṛi was suppressed. The next year was 11 Īśvara by both systems.

XC—*contd.*

COMMENCEMENT OF THE						
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			Kali
Day and month, A D	Week-day	Time of mean Miśha samkrānti	Day and month, A.D	Week-day.	a (here = t, the index of the *tithi*)	
13	14	17	19	20	23	1
		H. M S				
27 Mar (86) .	3 Tues .	7 3 0	22 Mar (81) .	5 Thur	6 6326	4421
26 Mar (86)	4 Wed	13 15 9	11 Mar (71)	3 Tues	220 9874	4422
26 Mar (85)	5 Thur	19 27 18	28 Feb (59)	0 Sat	96 7103	4423
27 Mar (86) .	0 Sat.	1 39 27	19 Mar (78)	6 Fri	131 3926	4424
27 Mar (86)	1 Sun .	7 51 36	8 Mar (67)	3 Tues	7 1155	4425
26 Mar (86)	2 Mon	14 3 45	26 Feb (57) .	1 Sun	221 4703	4426
26 Mar (85)	3 Tues	20 15 54	16 Mar (75)	0 Sat	256 1527	4427
27 Mar (86)	5 Thur	2 28 3	5 Mar (64)	4 Wed	131 8755	4428
27 Mar (86)	6 Fri	8 40 12	24 Mar (83)	3 Tues	166 5579	4429
26 Mar. (86) . .	0 Sat.	14 52 21	12 Mar (72)	0 Sat.	42 2808	4430
26 Mar. (85) .	1 Sun.	21 4 30	2 Mar (61)	5 Thur	256 6356	4431
27 Mar (86)	3 Tues	3 16 39	21 Mar (80)	4 Wed	291 8180	4432
27 Mar (86)	4 Wed	9 28 48	10 Mar. (69)	1 Sun	167 0409	4433
26 Mar (86)	5 Thur	15 40 57	27 Feb (58)	5 Thur	42 7637	4434
26 Mar (85) .	6 Fri	21 53 6	17 Mar (76)	4 Wed	77 4460	4435
27 Mar. (86)	1 Sun	4 5 15	7 Mar (66)	2 Mon	291 8009	4436
27 Mar (86)	2 Mon	10 17 24	25 Mar (85) .	1 Sun	326 4833	4437
26 Mar (86)	3 Tues .	16 29 33	14 Mar (74) .	5 Thur	202 2062	4438
26 Mar (85)	4 Wed .	22 41 42	3 Mar (62)	2 Mon	77 9289	4439
27 Mar (86)	6 Fri	4 53 51	22 Mar (81)	1 Sun	112 6114	4440
27 Mar (86)	0 Sat	11 6 0	12 Mar (71)	6 Fri	326 9662	4441
26 Mar (86)	1 Sun	17 18 9	29 Feb (60) .	3 Tues	202 6890	4442
26 Mar (85)	2 Mon	23 30 18	19 Mar (78)	2 Mon	237 3714	4443
27 Mar (86)	4 Wed.	5 42 27	8 Mar (67) .	6 Fri.	113 0943	4444
27 Mar (86)	5 Thur	11 54 36	27 Mar (86) .	5 Thur	147 7767	4445

TABLE

				CONCURRENT YEAR		JOVIAN SAMVATSARA		Mean intercalated (adhika) lunar month.
Kali	Śaka	Chaitrādi Vikrama.	Mēshādi solar year in Bengal.	Kollam	A.D.	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4445	1267	1402	751	519-20	*1344-45	18 Tārana	24 Vikrita	
4447	1268	1403	752	520-21	1345-46	19 Pārthiva	25 Khara	9 Mārgaśira
4448	1269	1404	753	521-22	1346 47	20 Vyaya	26 Nandana	
4449	1270	1405	754	522-23	1347-48	21 Sarvajit	27 Vijaya	
4450	1271	1406	755	523-24	*1348-49	22 Sarvadhārin	28 Jaya	6 Bhādrapada
4451	1272	1407	756	524-25	1349-50	23 Virōdhin	29 Manmatha	
4452	1273	1408	757	525-26	1350-51	24 Vikṛita	30 Durmukha	
4453	1274	1409	758	526-27	1351-52	25 Khara	31 Hēmalamba	2 Vaiśākha
4454	1275	1410	759	527-28	*1352-53	26 Nandana	32 Vilamba	
4455	1276	1411	760	528-29	1353-54	27 Vijaya	33 Vikārin	11 Māgha
4456	1277	1412	761	529-30	1354-55	28 Jaya	34 Śārvarin	
4457	1278	1413	762	530-31	1355 56	29 Manmatha	35 Plava	
4458	1279	1414	763	531-32	*1356-57	30 Durmukha	36 Śubhakrit	7 Āśvina
4459	1280	1415	764	532-33	1357-58	31 Hēmalamba	37 Śōbhana	
4460	1281	1416	765	533-34	1358-59	32 Vilamba	38 Krōdhin	
4461	1282	1417	766	534-35	1359-60	33 Vikārin	39 Viśvāvasu	4 Āshādha
4462	1283	1418	767	535-36	*1360 61	34 Śārvarin	40 Parābhava	
4463	1284	1419	768	536-37	1361-62	35 Plava	41 Plavanga	12 Phālguna
4464	1285	1420	769	537-38	1362-63	36 Śubhakrit	42 Kīlaka	
4465	1286	1421	770	538-39	1363 64	37 Śōbhana	43 Saumya	
4466	1287	1422	771	539 40	*1364 65	38 Krōdhin	44 Sādhārana	9 Mārgaśira
4467	1288	1423	772	540-41	1365-66	39 Viśvāvasu	45 Virōdhakrit	
4468	1289	1424	773	541-42	1366 67	40 Parābhava	46 Paridhāvin	
4469	1290	1425	774	542-43	1367-68	41 Plavanga	47 Pramādin	5 Śrāvana
4470	1291	1426	775	543-44	*1368 69	42 Kīlaka	48 Ānanda	

XC—*contd*

COMMENCEMENT OF THE						Kali
MEAN SOLAR YEAR.			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA SUKLA 1 ENDS)			
Day and month, A D.	Week day	Time of mean Micha samkranti	Day and month, A D	Week-day	a (here $=t$, the index of the *tithi*)	
1ᵈ	14	17	19	20	23	1
		H M S				
26 Mar (86)	6 Fri	18 6 45	15 Mar (75)	2 Mon.	23 4995	4446
27 Mar (86)	1 Sun	0 18 54	5 Mar (64)	0 Sat.	237 8543	4447
27 Mar (86)	2 Mon.	6 31 3	24 Mar (83)	6 Fri	272 5367	4448
27 Mar (86)	3 Tues.	12 43 12	13 Mar. (72)	3 Tues	148 2595	4449
26 Mar. (86)	4 Wed.	18 55 21	1 Mar (61)	0 Sat.	23 9824	4450
27 Mar. (86)	6 Fri	1 7 30	20 Mar (79)	6 Fri	58 6648	4451
27 Mar. (86)	0 Sat	7 19 39	10 Mar (69)	4 Wed	273 0197	4452
27 Mar (86)	1 Sun	13 31 48	27 Feb (58)	1 Sun	148 7424	4453
26 Mar (86)	2 Mon	19 43 57	17 Mar (77)	0 Sat	188 4248	4454
27 Mar (86)	4 Wed	1 56 6	6 Mar (65)	4 Wed	59 1477	4455
27 Mar (86)	5 Thur	8 8 15	25 Mar (84)	3 Tues	93 8300	4456
27 Mar. (86)	6 Fri	14 20 24	15 Mar (74)	1 Sun.	308 1849	4457
26 Mar. (86)	0 Sat	20 32 33	3 Mar (63)	5 Thur	183·9077	4458
27 Mar (86)	2 Mon	2 44 42	22 Mar (81)	4 Wed	218·5902	4459
27 Mar. (86)	3 Tues	8 56 51	11 Mar (70)	1 Sun	94 3129	4460
27 Mar. (86)	4 Wed	15 9 0	1 Mar. (60)	6 Fri	308 6678	4461
26 Mar (86)	5 Thur.	21 21 9	18 Mar (78)	4 Wed.	4 7182	4462
27 Mar (86)	0 Sat	3 33 18	8 Mar (67)	2 Mon.	219 0780	4463
27 Mar (86)	1 Sun	9 45 27	27 Mar (86)	1 Sun	253·7554	4464
27 Mar (86)	2 Mon.	15 57 36	16 Mar (75)	5 Thur.	129 4788	4465
26 Mar (86)	3 Tues.	22 9 45	4 Mar (64)	2 Mon.	5 2011	4466
27 Mar (86)	5 Thur	4 21 54	23 Mar (82)	1 Sun	39 8835	4467
27 Mar. (86)	6 Fri	10 34 3	13 Mar (72)	6 Fri	254·2383	4468
27 Mar (86)	0 Sat	16 46 12	2 Mar (61)	3 Tues	129 9812	4469
26 Mar (86)	1 Sun	22 58 21	20 Mar (80)	2 Mon.	164·6435	4470

				CONCURRENT YEAR				Mean intercalated (adhika) lunar month
Kali.	Śaka	Chaitrādi Vikrama.	Mishādi solar year in Bengal	Kollam	A.D	Jovian Samvatsara Southern system	Jovian Samvatsara Northern system	
1	2	3	3a	4	5	6	7	8a
4471	1292	1427	776	544-45	1369-70	43 Saumya	49 Rākshasa	.
4472	1293	1428	777	545-46	1370-71	44 Sādhārana	50 Anala	2 Vaiśākha
4473	1294	1429	778	546-47	1371-72	45 Virōdhakṛt	51 Pingala	
4474	1295	1430	779	547-48	*1372-73	46 Paridhāvin	52 Kālayukta	10 Pausha
4475	1296	1431	780	548-49	1373-74	47 Pramādin	53 Siddhārthin	
4476	1297	1432	781	549 50	1374-75	48 Ānanda	54 Raudra	
4477	1298	1433	782	550-51	1375-76	49 Rākshasa	55 Durmati	7 Āśvina
4478	1299	1434	783	551-52	*1376-77	50 Anala	56 Dundubhi	
4479	1300	1435	784	552-53	1377-78	51 Pingala	57 Rudhirōdgārin	
4480	1301	1436	785	553-54	1378-79	52 Kālayukta	58 Raktāksha	3 Jyēshtha
4481	1302	1437	786	554-55	1379-80	53 Siddhārthin	59 Krōdhana	
4482	1303	1438	787	555-56	*1880 81	54 Raudra	60 Kshaya	12 Phālguna
4483	1804	1439	788	556-57	1381-82	55 Durmati	1 Prabhava	..
4484	1805	1440	789	557-58	1382-83	56 Dundubhi	2 Vibhava	
4485	1306	1441	790	558 59	1383-84	57 Rudhirōdgārin	3 Śukla	9 Mārgaśira
4486	1807	1442	791	559-60	*1384-85	58 Raktāksha	4 Pramōda	
4487	1808	1443	792	560 61	1385 86	59 Krōdhana	5 Prajāpati	
4488	1809	1444	793	561-62	1386-87	60 Kshaya	6 Angiras	5 Śrāvana
4489	1310	1445	794	562-63	1387-88	1 Prabhava	7 Śrīmukha	
4490	1811	1446	795	563-64	*1388 89	2 Vibhava	8 Bhāva	
4491	1312	1447	796	564-65	1389-90	3 Śukla	9 Yuvan	2 Vaiśākha
4492	1813	1448	797	565-66	1390-91	4 Pramōda	10 Dhātṛ	
4493	1314	1449	798	566-67	1391-92	5 Prajāpati	11 Isvara	10 Pausha
4494	1815	1450	799	567-68	*1392-93	6 Angiras	12 Bahudhānya	...
4495	1816	1451	800	568 69	1393-94	7 Srīmukha	13 Pramāthin	...

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COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR			MEAN LUNI-SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS)			
Day and month, A D	Week-day	Time of mean Mēsha-samkrānti	Day and month, A.D	Week-day	a (here $= t$, the index of the tithi)	
13	14	17	19	20	23	1
		H. M S				
27 Mar (86)	3 Tues	5 10 30	9 Mar (68)	6 Fri	40 3664	4471
27 Mar (86)	4 Wed	11 22 39	27 Feb (58)	4 Wed.	254 7212	4472
27 Mar (86)	5 Thur	17 34 48	18 Mar (77)	3 Tues.	289 4036	4473
26 Mar (86)	6 Fri	23 46 57	6 Mar (66)	0 Sat.	165 1264	4474
27 Mar (86)	1 Sun	5 59 6	25 Mar (84)	6 Fri.	199 8088	4475
27 Mar (86)	2 Mon	12 11 15	14 Mar. (73)	3 Tues.	75 5317	4476
27 Mar (86)	3 Tues	18 23 24	4 Mar (63)	1 Sun	289 8864	4477
27 Mar (87)	5 Thur	0 35 33	22 Mar (82)	0 Sat.	324 5689	4478
27 Mar (86)	6 Fri.	6 47 42	11 Mar (70)	4 Wed.	200 2917	4479
27 Mar (86)	0 Sat	12 59 51	28 Feb (59)	1 Sun	76 0146	4480
27 Mar (86)	1 Sun	19 12 0	19 Mar (78)	0 Sat.	110 6969	4481
27 Mar (87)	3 Tues.	1 24 9	8 Mar (68)	5 Thur.	325 0518	4482
27 Mar (86)	4 Wed.	7 36 18	26 Mar (85)	3 Tues.	21 1022	4483
27 Mar (86)	5 Thur.	13 48 27	16 Mar (75)	1 Sun	235 4571	4484
27 Mar (86)	6 Fri	20 0 36	5 Mar (64)	5 Thur.	111 1798	4485
27 Mar (87)	1 Sun	2 12 45	23 Mar (83)	4 Wed.	145 8623	4486
27 Mar (86)	2 Mon.	8 24 54	12 Mar (71)	1 Sun	21 5851	4487
27 Mar (86)	3 Tues	14 37 8	2 Mar (61)	6 Fri.	235 9399	4488
27 Mar (86)	4 Wed	20 49 12	21 Mar (80)	5 Thur	270 6223	4489
27 Mar (87)	6 Fri	3 1 21	9 Mar (69)	2 Mon	146 3452	4490
27 Mar (86)	0 Sat	9 13 30	26 Feb (57)	6 Fri	22 0680	4491
27 Mar (86)	1 Sun	15 25 39	17 Mar (76)	5 Thur	56 7503	4492
27 Mar (86)	2 Mon	21 37 48	7 Mar. (66)	3 Tues	271 1052	4493
27 Mar (87)	4 Wed	3 49 57	25 Mar (85)	2 Mon.	305 7876	4494
27 Mar (86)	5 Thur	10 2 6	14 Mar (73)	6 Fri.	181 5104	4495

TABLE

| | | | | | | Jovian Samvatsara | | Mean intercalated (*adhika*) lunar month |
Kali	Śaka	Chaitrādi Vikrama	Mēshādi solar year in Bengal	Kollam	A D	Southern system	Northern system	
1	2	3	3a	4	5	6	7	8a
4496	1317	1452	801	569-70	1394-95	8 Bhāva .	14 Vikrama	7 Āsvinā
4497	1318	1453	802	570-71	1395 96	9 Yuvan .	15 Vṛisha .	
4498	1319	1454	803	571-72	*1396-97	10 Dhātṛi .	16 Chitrabhānu	
4499	1320	1455	804	572-73	1397-98	11 Īśvara .	17 Subhānu	3 Jyēshtha
4500	1321	1456	805	573-74	1398-99	12 Bahudhānya .	18 Tārana .	
4501	1322	1457	806	574-75	1899-1400	18 Pramāthin	19 Pārthiva	12 Phālguna .
4502	1323	1458	807	575-76	*1400-01	14 Vikrama .	20 Vyaya .	...

(The spanning header "CONCURRENT YEAR" covers columns 1 through 7.)

XC—concld

COMMENCEMENT OF THE						Kali.
MEAN SOLAR YEAR			MEAN LUNI SOLAR YEAR (MEAN SUNRISE OF THE CIVIL DAY ON WHICH CHAITRA ŚUKLA 1 ENDS).			
Day and month, A D	Week-day	Time of mean Mesha-samkrānti	Day and month, A.D	Week-day	a (horo=t, the index of the tithi)	
13	14	17	19	20	23	1
		H M S				
27 Mar (86)	6 Fri.	16 14 15	3 Mar (62) .	3 Tues .	57 2833	4496
27 Mar (86)	0 Sat.	22 26 24	22 Mar (81) .	2 Mon. .	91·9157	4497
27 Mar (87) . .	2 Mon .	4 38 33	11 Mar (71) .	0 Sat .	303 2704	4498
27 Mar. (86) . .	3 Tues .	10 50 42	28 Feb (59) .	4 Wed. .	181 9933	4499
27 Mar (86)	4 Wed. .	17 2 51	19 Mar (78) .	3 Tues .	216 6757	4500
27 Mar (86) .	5 Thur .	23 15 0	8 Mar (67) .	0 Sat. .	92 3986	4501
27 Mar (87) . .	0 Sat. .	5 27 9	26 Mar (86) .	6 Fri .	127 0810	4502

TABLE XCII

CENTURY-TABLE.

VALUE OF a ($= t$) AT BEGINNING OF CENTURIES KY, ie. AT MEAN SUNRISE ON DAY OF OCCURRENCE OF MEAN MESHA-SAMKRĀNTI (MEAN SUN AT 0°) IN FIRST YEAR OF CENTURY. [CENTURIES 38, 44, WERE DEFECTIVE, THE REST COMMON]

Beginning of K Y century	Beginning in A D	Week-day	a ($= t$)
37	599	(0)	6228 4770
38	699	(0)	5100-3761
39	799	(6)	3633 6433
40	899	(6)	2505 5425
41	999	(6)	1377 4416
42	1099	(6)	249 3408
43	1199	(6)	9121 2399
44	1299	(6)	7993 1391
45	1399	(5)	6526 4063

For odd years of centuries use the *Siddhānta-Śirōmani* Table LVII-B (*above, Vol XV*)

TABLE XCIII

MEAN SUNRISE VALUES OF a (DISTANCE OF [MEAN MOON FROM MEAN SUN) IN 10,000THS OF CIRCLE FOR A MONTH PREVIOUS TO THE DAY ON WHICH MEAN MESHA-SAMKRĀNTI OCCURRED

Interval of days from mean Mesha-samkrānti day	Week-day	a (mean sunrise value)	Interval of days from mean Mesha-samkrānti day	Week-day	a (mean sunrise value)
1	2	3	1	2	3
31	(4)	9502 4085	15	(6)	4920 5202
30	(5)	9841 0404	14	(0)	5259 1522
29	(6)	179 6724	13	(1)	5597-7842
28	(0)	518 3044	12	(2)	5936 4162
27	(1)	856 9364	11	(3)	6275-0482
26	(2)	1195 5684	10	(4)	6613 6801
25	(3)	1534 2004	9	(5)	6952 3121
24	(4)	1872 8324	8	(6)	7290 9441
23	(5)	2211 4643	7	(0)	7629 5761
22	(6)	2550 0963	6	(1)	7968 2081
21	(0)	2888-7283	5	(2)	8306 8401
20	(1)	3227 3603	4	(3)	8645 4721
19	(2)	3565 9923	3	(4)	8984 1040
18	(3)	3904 6243	2	(5)	9322-7360
17	(4)	4243 2563	1	(6)	9661 3680
16	(5)	4581 8682	0	(0)	0-0

The use of this Table is explained in Example 2 of this article, and in Example 1 of article on the *First Árya-Siddnānta, mean system* (*above, Vol XVI*).

TABLE XCIV.

Time-equivalents of the tithi (a or t), nakshatra (n), and yoga (y) units.

In very close cases it is sometimes necessary to calculate the exact moment of the beginning and ending of *tithis*, *nakshatras* and *yogas*, with greater accuracy than can be obtained by the use of Table X, *Indian Calendar*, or Table LXX (*above, Vol. XVI, p. 216*), where the time-equivalent of the unit, respectively, is given only in hours and minutes. My general working Tables for several of the Hindu astronomical *Siddhāntas* already published yield results, stated in measurement by 10,000ths of the circle, with an accuracy extending to four places of decimals, and the following Table enables the result to be translated into time down to a fraction of a second. It may be used for all astronomical authorities.

The tithi-index unit.

The *tithi*-unit is $\frac{1}{10,000}$th of a mean lunation. The mean lunation, according to the *Ārya-* and *Sūrya-Siddhāntas*, occupies $29^d 12^h 44^m 2^s 79$. The unit, or 10,000th part of this, is $4^m 2524046$, or $4^m 15^s 144279$.

The nakshatra-index unit.

The moon's *nakshatra*, or her position in the heavens, mean or true, is found by adding the *tithi*-index, a or t, to the index of the sun's longitude, s, mean or true. Both these values are found in the ordinary course of calculation for a date.

The mean *nakshatra*-value $n = 10,000$ is reached in $27^d 7^h 43^m 12^s 3$. In this period the sun's mean motion amounts, in 10,000ths of circle measurement, to 748·0087 (*Table XLIV above (Vol. XIV)*) and the moon's mean distance from mean sun increases (*Table LIV A, B (Vol. XV)*) to 9251·9913. Total 10,000.

$27^d 7^h 43^m 12^s·3 = 39343^m·205$, and this divided by 10,000 fixes the time-equivalent of the *nakshatra*-unit as $3^m·9343205$, or $3^m 56^s·05923$.

The yoga-index unit.

Similarly the *yoga-chakra* is estimated by the *Sūrya-Siddhānta* (*Indian Calendar, p. 62, § 113*) as occupying 36605·116 minutes of time, or $25^d 10^h 5^m 6^s·96$ [1]. The *yoga*-unit therefore is $3^m·6605116$, or $3^m 39^s·6307$.

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[1] The *yoga* formula is $y = s$ (sun's long.) $+ n$ (moon's *nakshatra*), and, since $n = s + a$, $y = 2s + a$. In the period noted it will be found by calculation, using Table XLIV (*above, Vol. XIV*), that the mean sun s arrives, in 10,000ths of circle measurement, at long. 695·9511, and by using Table LXIV (*Vol. XVI*) that in the same period the mean moon has increased her distance from mean sun (a) by 8608·0964. Twice $s = 1391·9022$, and this $+ 8608·0964$ (the value of a) $= 9999·9988$, practically 10,000 exactly. Table LXIV was prepared according to the *First Ārya-Siddhānta*. Using *Siddhānta-Śirōmani* and *Brahma Siddhānta* estimates (*Table LIV*) the total amounts to 10,000·0015. I have as yet no similar Table according to *Sūrya-Siddhānta* requirements, but from what has been said it may be assumed that its estimate of the time occupied by one *yoga-chakra* ($= 10,000$) is correct.

TABLE XCIV-A.

TIME-EQUIVALENTS

TITHI-INDEX UNITS

(" Arg "= a or t.)

Arg	H	M	S.	Arg	H	M	S	Arg	H	M	S	Arg	H	M	S
1	0	4	15 11	30	2	7	8.33	59	4	10	53 51	88	6	14	12 70
2	0	8	30 29	31	2	11	49 47	60	4	15	8 7	89	6	18	27 84
3	0	12	45 43	32	2	16	4 62	61	4	19	23 80	90	6	22	42 99
4	0	17	0 58	33	2	20	19·76	62	4	23	38 95	91	6	26	58 13
5	0	21	15 72	34	2	24	34 91	63	4	27	54 09	92	6	31	13 27
6	0	25	30 87	35	2	28	50 05	64	4	32	9 23	93	6	35	28 42
7	0	29	46 01	36	2	33	5 19	65	4	36	24 38	94	6	39	43 56
8	0	34	1 15	37	2	37	20 34	66	4	40	39 52	95	6	43	58·71
9	0	38	16 30	38	2	41	35 48	67	4	44	54 67	96	6	48	13 85
10	0	42	31 44	39	2	45	50 63	68	4	49	9 81	97	6	52	29 00
11	0	46	46 59	40	2	50	5 77	69	4	53	24 96	98	6	56	44 14
12	0	51	1 73	41	2	54	20 92	70	4	57	40 10	99	7	0	59 28
13	0	55	16 88	42	2	58	36 06	71	5	1	55 24	100	7	5	14 43
14	0	59	32 02	43	3	2	51 20	72	5	6	10 39	200	14	10	28 86
15	1	3	47 16	44	3	7	6 35	73	5	10	25 53	300	21	15	43 28
16	1	8	2 31	45	3	11	21 49	74	5	14	40 68	400	28	20	57·71
17	1	12	17 45	46	3	15	36 64	75	5	18	55 82	500	35	26	12 14
18	1	16	32 60	47	3	19	51·78	76	5	23	10 97	600	42	31	26 57
19	1	20	47 74	48	3	24	6 93	77	5	27	26 11	700	49	36	41 00
20	1	25	2 29	49	3	28	22 07	78	5	31	41 25	800	56	41	55 42
21	1	29	18 03	50	3	32	37 21	79	5	35	56 40	900	63	47	9 85
22	1	33	33 17	51	3	36	52 36	80	5	40	11 54	1000	70	52	24 28
23	1	37	48 32	52	3	41	7 50	81	5	44	26 69				
24	1	42	3 46	53	3	45	22 65	82	5	48	41 83				
25	1	46	18 61	54	3	49	37 79	83	5	52	56 98				
26	1	50	33·75	55	3	53	52 94	84	5	57	12 20				
27	1	54	48 90	56	3	58	8 08	85	6	1	27 28				
28	1	59	4 04	57	4	2	23 22	86	6	5	42 41				
29	2	3	19 18	58	4	6	38 37	87	6	9	57 55				

TABLE XCIV-B

TIME-EQUIVALENTS

DECIMALS OF TITHI-INDEX UNITS

First 2 decimals	M	S	First 2 decimals	M	S.	First 3 decimals	M	S
·01	0	2 55	34	1	26·75	67	2	50·95
02	0	5 10	35	1	29 30	·68	2	53 50
·03	0	7 65	36	1	31 85	69	2	56 05
·04	0	10 21	37	1	34 40	·70	2	58 60
05	0	12·76	38	1	36·95	71	3	1·15
·06	0	15 31	39	1	39 51	·72	3	3·70
·07	0	17·88	40	1	42·06	73	3	6 26
·08	0	20 41	41	1	44 61	·74	3	8 81
09	0	22·96	42	1	47 16	·75	3	11 36
10	0	25 51	43	1	49·71	·76	3	13·91
11	0	28 07	44	1	52 26	·77	3	16 46
12	0	30 62	45	1	54 81	·78	3	19 01
·13	0	33 17	46	1	57 37	·79	3	21 56
14	0	35·72	47	1	59·92	80	3	24 12
15	0	38 27	48	2	2 47	81	3	26 67
·16	0	40 82	49	2	5·02	82	3	29 22
17	0	43 37	50	2	7 57	83	3	31·78
·18	0	45·93	51	2	10·12	84	3	34 32
·19	0	48 48	52	2	12·68	85	3	36 87
20	0	51·03	58	2	15 23	86	3	39 42
·21	0	53 58	54	2	17·78	·87	3	41·98
22	0	56 13	55	2	20 33	·88	3	44 53
23	0	58 68	56	2	22 88	89	3	47 08
24	0	61 23	57	2	25 43	·90	3	49·63
25	1	3·79	58	2	27·98	·91	3	52 18
·26	1	6 34	59	2	30·54	·92	3	54·73
27	1	8 89	60	2	33 09	·93	3	57 28
28	1	11 44	61	2	35 64	94	3	59 84
·29	1	13·99	62	2	38 19	·95	4	2 39
·30	1	16 54	·63	2	40·74	·96	4	4·94
·31	1	19·09	64	2	43 29	·97	4	7 49
·32	1	21·65	·65	2	45 84	·98	4	10 04
33	1	24 20	·66	2	48 40	·99	4	12 59

3rd and 4th decimals	S	3rd and 4th decimals	S	3rd and 4th decimals.	S
·0001	0·03	·0034	0 87	·0067	1 71
·0002	0 05	0035	0 89	0068	1·73
0003	0·08	·0036	0 92	·0069	1·76
0004	0 10	0037	0·94	0070	1·79
0005	0·13	0038	0·97	·0071	1·81
0006	0 15	0039	1·00	·0072	1·84
·0007	0 18	·0040	1·02	·0073	1 86
0008	0 20	·0041	1 05	0074	1 89
·0009	0 23	0042	1 07	0075	1·91
0010	0 26	0043	1 10	·0076	1·94
0011	0 28	0044	1 12	0077	1·96
0012	0 31	0045	1 15	·0078	1·99
·0013	0 33	·0046	1 17	·0079	2 02
0014	0 36	0047	1 20	·0080	2·04
0015	0 38	·0048	1 22	·0081	2·07
·0016	0 41	0049	1·25	0082	2·09
0017	0 43	·0050	1 28	·0083	2 12
0018	0 46	·0051	1 30	·0084	2 14
0019	0 48	0052	1 33	·0085	2 17
·0020	0·51	·0053	1·35	·0086	2 19
0021	0 54	0054	1 38	·0087	2 22
·0022	0 56	0055	1 40	0088	2 25
0023	0 59	0056	1 43	0089	2 27
·0024	0 61	0057	1 45	0090	2 30
0025	0 64	0058	1 48	·0091	2 32
0026	0 66	0059	1 51	0092	2 35
0027	0 69	·0060	1 53	0093	2 37
0028	0 71	0061	1 56	0094	2 40
0029	0 74	0062	1 58	0095	2 42
0030	0 77	0063	1 61	0096	2 45
0031	0·79	0064	1 63	0097	2 47
0032	0 82	0065	1 66	·0098	2 50
0033	0 84	0066	1 68	0099	2 52

TABLE XCIV-C.

TIME-EQUIVALENTS

NAKSHATRA-INDEX UNITS

Arg.	H	M	S	Arg	H	M	S	Arg	H	M	S	Arg	H	M	S
1	0	3	56 06	31	2	1	57 84	61	3	59	59 61	91	5	58	1 39
2	0	7	52 12	32	2	5	53 90	62	4	3	55 67	92	6	1	57 45
3	0	11	48 18	33	2	9	49 95	63	4	7	51 73	93	6	5	53 51
4	0	15	44 24	34	2	13	46 01	64	4	11	47 79	94	6	9	49 57
5	0	19	40 30	35	2	17	42 07	65	4	15	43 85	95	6	13	45 63
6	0	23	36 36	36	2	21	38·13	66	4	19	39 91	96	6	17	41 69
7	0	27	32 41	37	2	25	34 19	67	4	23	35 97	97	6	21	37 75
8	0	31	28 47	38	2	29	30 25	68	4	27	32 03	98	6	25	33 80
9	0	35	24 53	39	2	33	26 31	69	4	31	28 09	99	6	29	29 86
10	0	39	20 59	40	2	37	22 37	70	4	35	24 15	100	6	33	25 92
11	0	43	16 65	41	2	41	18 43	71	4	39	20 21	200	13	6	51·85
12	0	47	12 71	42	2	45	14 49	72	4	43	16 26	300	19	40	17 78
13	0	51	8·77	43	2	49	10 55	73	4	47	12 32				
14	0	55	4 83	44	2	53	6 61	74	4	51	8 38				
15	0	59	0 89	45	2	57	2 67	75	4	55	4 14				
16	1	2	56 95	46	3	0	58 72	76	4	59	0 50				
17	1	6	53 01	47	3	4	54 78	77	5	2	56 56				
18	1	10	49 07	48	3	8	50 84	78	5	6	52 62				
19	1	14	45 13	49	3	12	46 90	79	5	10	48 68				
20	1	18	41·18	50	3	16	42 96	80	5	14	44 74				
21	1	22	37 24	51	3	20	39 02	81	5	18	40 80				
22	1	26	33 30	52	3	24	35 08	82	5	22	36 86				
23	1	30	29 36	53	3	28	31 14	83	5	26	32 92				
24	1	34	25 42	54	3	32	27 20	84	5	30	28 98				
25	1	38	21 48	55	3	36	23 26	85	5	34	25 03				
26	1	42	17 54	56	3	40	19 32	86	5	38	21 09				
27	1	46	13·60	57	3	44	15 38	87	5	42	17·15				
28	1	50	9 66	58	3	48	11 44	88	5	46	13 21				
29	1	54	5 72	59	3	52	7 49	89	5	50	9 27				
30	1	58	1·78	60	3	56	3 55	90	5	54	5 33				

TABLE XCIV-D.

TIME-EQUIVALENTS,

DECIMALS OF NAKSHATRA-INDEX UNITS.

First decimals	M	S	First decimals	M	S	First decimals	M	S
01	0	2·0	24	1	20·20	·67	2	35 16
02	0	4·72	25	1	22·62	·68	2	40 52
03	0	7·??	26	1	24·?9	69	2	42 88
04	0	?·41	37	1	27·31	·70	2	45 21
05	0	11·??	28	1	2?·70	71	2	47 60
06	0	14·1?	29	1	32·06	·72	2	49·96
07	0	1?·??	40	1	34·12	·73	2	52 32
08	0	1?·??	41	1	36·78	74	2	54 68
09	0	21·2?	42	1	3?·14	·75	2	57 04
10	0	2?·?1	43	1	41·51	76	2	59 40
11	0	2?·??	44	1	43·87	77	3	1 77
12	0	2?·??	45	1	46·23	·78	3	4 13
13	0	?·??	46	1	4?·59	·79	3	6 49
14	?	?·??	47	1	50·95	80	3	8 85
15	0	3?·41	48	1	?·31	·81	3	11 21
16	?	??·??	49	1	55·67	·82	3	13 57
17	0	4 1?	50	1	??·03	·83	3	15·93
18	?	45·4?	51	2	0·??	84	3	18 29
19	0	4?·??	52	2	2·73	·85	3	20·65
20	0	47·?1	53	2	5·11	·86	3	23 01
21	0	4?·??	54	2	7·47	·87	3	25 37
22	?	5?·??	55	2	9·8?	88	3	27·73
23	?	??·??	56	2	12·19	89	3	30·09
24	?	??·??	57	2	14·55	90	3	32 45
·25	?	?·??	58	2	1?·91	91	3	34·81
?	?	?·??	59	2	1?·??	·92	3	37 17
?	?	3?·?	60	2	2?·??	93	3	3?·??
?	?	?	61	2	5?·??	94	?	41·??
?	?	?	62	2	?·??	95	3	44·??
?	?	?	63	2	2?·??	?	3	4?·??
?	?	?	64	2	3?·??	?	3	?·??
?	?	?	?	2	3?·??	?	3	?·??
?	?	?	?	2	5?·??	?	3	5?·??

3rd and 4th decimals	S	3rd and 4th decimals	S	3rd and 4th decimals	S.
·0001	0·02	0034	0 80	0067	1 58
0002	0 05	0035	0 83	0068	1 61
0003	0 07	0036	0 85	0069	1 63
·0004	0 09	0037	0 87	0070	1 65
0005	0 12	·0038	0 90	0071	1 68
0006	0 14	·0039	0·92	0072	1 70
0007	0·17	0040	0 94	0073	1 72
0008	0·19	·0041	0 97	0074	1 75
0009	0 21	·0042	0·99	0075	1 77
0010	0 24	0043	1 02	0076	1·79
0011	0 26	·0044	1 04	0077	1 82
0012	0 28	0045	1·06	0078	1·84
0013	0 31	0046	1 09	0079	1 86
0014	0 33	0047	1 11	0080	1 89
0015	0 35	·0048	1 13	·0081	1 91
0016	0 38	0049	1 16	0082	1 94
·0017	0·40	0050	1 18	0083	1 96
0018	0 42	0051	1 20	·0084	1 98
0019	0 45	·0052	1 23	·0095	2 01
·0020	0·47	0053	1 25	0096	2 03
0021	0 50	0054	1·27	·0087	2 05
·0022	0 52	0055	1 30	0088	2 08
·0023	0·54	·0056	1 32	·0089	2 10
·0024	0·57	0057	1·35	·0090	2 12
·0025	0·59	·0058	1 37	·0091	2 15
·0026	0·61	·0059	1 39	·0092	2 17
·0027	0·64	·0060	1 42	·0093	2 20
0028	0·66	·0061	1 44	·0094	2 22
·0029	0·68	·0062	1 46	·0095	2 24
0030	0·71	·0063	1 49	·0096	2 27
·0031	0·73	·0064	1 71	·0097	2 29
·0032	0·76	0065	1 73	0098	2 31
·0033	0·74	·0066	1 76	·00?0	2 34

TABLE XCIV-E.

TIME-EQUIVALENTS.

YOGA-INDEX UNITS.

Arg	H.	M.	S	Arg	H	M	S	Arg	H	M.	S	Arg	H.	M	S.
1	0	8	39·63	31	1	53	28 55	61	3	43	17 47	91	5	33	6·39
2	0	7	19·26	32	1	57	8 18	62	3	46	57 10	92	5	36	46 02
3	0	10	58·89	33	2	0	47 81	63	3	50	36 73	93	5	40	25 65
4	0	14	38·52	34	2	4	27·44	64	3	54	16 36	94	5	44	5 29
5	0	18	18·15	35	2	8	7 07	65	3	57	56·00	95	5	47	44·92
6	0	21	57·78	36	2	11	46·71	66	4	1	35·63	96	5	51 -	24 55
7	0	25	37·41	37	2	15	26 34	67	4	5	15 26	97	5	55	4·18
8	0	29	17 05	38	2	19	5 97	68	4	8	54 89	98	5	58	43·81
9	0	32	56·68	39	2	22	45 60	69	4	12	34 52	99	6	2	23·44
10	0	36	36·31	40	2	26	25 23	70	4	16	14 15	100	6	6	3 07
11	0	40	15·04	41	2	30	4 86	71	4	19	53·78	200	12	12	6·14
12	0	43	55·57	42	2	33	44 49	72	4	23	33 41	300	18	18	9 21
13	0	47	35 20	43	2	37	24 12	73	4	27	13 04				
14	0	51	14 83	44	2	41	3 75	74	4	30	52 67				
15	0	54	54 46	45	2	44	43 38	75	4	34	32 30				
16	0	58	34 09	46	2	48	23 01	76	4	38	11 93				
17	1	2	13 72	47	2	52	2 64	77	4	41	51 56				
18	1	5	53 35	48	2	55	42 27	78	4	45	31 19				
19	1	9	32 98	49	2	59	21 90	79	4	49	10 83				
20	1	13	12 61	50	3	3	1 53	80	4	52	50 46				
21	1	16	52 24	51	3	6	41 17	81	4	56	30 09				
22	1	20	31 88	52	3	10	20 80	82	5	0	9 72				
23	1	24	11 51	53	3	14	0 43	83	5	3	49 85				
24	1	27	51 14	54	3	17	40 06	84	5	7	28 98				
25	1	31	30 77	55	3	21	19 69	85	5	11	8 61				
26	1	35	10 40	56	3	24	59 32	86	5	14	48 24				
27	1	38	50 03	57	3	28	38 95	87	5	18	27 87				
28	1	42	29 66	58	3	32	18 58	88	5	22	7 50				
29	1	46	9 29	59	3	35	58 21	89	5	25	47 13				
30	1	49	48 92	60	3	39	37 84	90	5	29	26·76				

TABLE XCIV-F

First 2 decimals	M.	S.	First 2 decimals	M.	S	First 2 decimals	M	S
01	0	2 20	34	1	14 67	·67	2	27 15
02	0	4 39	·35	1	16 87	·68	2	29 35
·03	0	6 59	36	1	19 07	·69	2	31 55
·04	0	8·79	37	1	21 26	·70	2	33·74
·05	0	10·98	38-	1	23 46	·71	2	35 94
·06	0	13 18	·39	1	25 66	·72	2	38 13
·07	0	15 37	40	1	27·85	·73	2	40 33
·08	0	17 57	41	1	30·05	·74	2	42 53
·09	0	19·77	42	1	32 24	·75	2	44·72
·10	0	21·96	43	1	34 44	·76	2	46 92
11	0	24 16	44	1	36·64	·77	2	49 12
12	0	26 36	45	1	38 83	·78	2	51 31
·13	0	28 55	46	1	41·03	·79	2	53 51
14	0	30·75	47	1	43 23	80	2	55·70
·15	0	32·94	48	1	45 42	·81	2	57·90
16	0	35 14	49	1	47 62	·82	3	0·10
17	0	37 34	·50	1	49 82	·83	3	2 29
·18	0	39 53	·51	1	52 01	·84	3	4·49
19	0	41·73	52	1	54 21	·85	3	6·69
·20	0	43·93	53	1	56 40	86	3	8 88
21	0	46 12	54	1	58 60	87	3	11·08
·22	0	48 32	·55	2	0·80	88	3	13 28
23	0	50 52	56	2	2 99	89	3	15 47
24	0	52·71	57	2	5 19	·90	3	17·67
·25	0	54·91	58	2	7 89	·91	3	19·86
26	0	57 10	·59	2	9 58	92	3	22·06
·27	0	59 30	·60	2	11·78	·93	3	24 26
·28	1	1 50	61	2	13 97	94	3	26 45
29	1	3 69	62	2	16 17	·95	3	28 65
30	1	5·89	63	2	18 37	96	3	30 85
31	1	8·09	64	2	20·56	97	3	33 04
·32	1	10·28	·65	2	22·76	·98	3	35 24
·33	1	12 48	·66	2	24 96	99	3	37 43

3rd and 4th decimals	S	3rd and 4th decimals	S	3rd and 4th decimals	S
·0001	0·02	·0034	0·75	0067	1·47
·0002	0·04	·0035	0·77	·0068	1·49
·0003	0·07	·0036	0·79	·0069	1·52
·0004	0·09	·0037	0·81	0070	1·54
0005	0 11	0038	0·83	·0071	1·56
·0006	0 13	0039	0·86	·0072	1·58
·0007	0 15	·0040	0·88	·0073	1·60
·0008	0 18	0041	0·90	·0074	1·63
·0009	0 20	0042	0·92	·0075	1·65
0010	0 22	·0043	0·94	0076	1·67
·0011	0 24	0044	0 97	·0077	1·69
·0012	0 26	0045	0·99	0078	1·71
·0013	0 29	·0046	1 01	0079	1·74
·0014	0 31	·0047	1·03	0080	1·76
0015	0 33	0048	1 05	·0081	1·78
0016	0 35	0049	1·08	·0082	1 80
·0017	0 37	·0050	1 10	0083	1 82
·0018	0 40	0051	1 12	0084	1 84
0019	0 42	0052	1 14	·0085	1 87
·0020	0 44	0053	1 16	0086	1 89
0021	0 46	0054	1 19	·0087	1 91
0022	0 48	0055	1 21	0088	1·93
0023	0 51	0056	1 23	0089	1 95
·0024	0·53	0057	1 25	0090	1 98
·0025	0 55	0058	1 27	0091	2 00
0026	0 57	0059	1 30	0092	2 02
·0027	0·59	0060	1 32	0093	2 04
0028	0 61	0061	1 34	·0094	2 06
0029	0 64	0062	1 36	0095	2·09
·0030	0 66	0063	1 38	0096	2 11
0031	0·68	·0064	1 41	0097	2 13
·0032	0·70	0065	1 43	0098	2 15
0033	0·72	0066	1 45	0099	2 17

No 16.—VELVIKUDI GRANT OF NEDUNJADAIYAN. THE THIRD YEAR OF REIGN

By H Krishna Sastri, B.A, Ootacamund.

Sixteen years ago, when Mr Venkayya in his Epigraphical Report for 1908 (pp 50 ff) discussed with great ability the contents of the fourth of the early Pāndya copper-plates discovered till then, he remarked "The originals of these plates have not been traced The following account of them is based on a preliminary study of two excellent impressions belonging probably to Sir Walter Elliot's collections kindly placed at my disposal by Dr Fleet in 1893" These duplicate impressions of the grant now in the editor's possession, are marked by Dr Fleet "I-n-11" and must have been originally intended for publication in the *Indian Antiquary* Mr Venkayya, however, could not at once prepare an article on them, as the early Pandya chronology was then obscure About the end of 1915, Dr L D Barnett of the British Museum, London, sent me impressions of a copper-plate inscription preserved in that institution and wished to know if it had been published and what its contents were Curiously enough, it happened that these were the very same impressions of which Mr Venkayya was unable to trace the originals I wrote back to Dr Barnett informing that the plates contained on them an important Pāndya grant which had been already noticed in the Epigraphical Report for 1908 and asked for certain details about them He says briefly "There is no seal on the grant the plates are held by a thin copper-ring, which has been cut" The detailed measurement of the plates and their number, consequently, remain to be what has been described by Mr Venkayya, viz, these are ten copper-plates, of which the first seven are numbered on the left margin on their inner sides and the impressions measure $10\frac{7}{8}''$ by $3\frac{1}{8}''$, the first and the last plates being written only on their inner sides

The writing on the plates is both in the Grantha and Vatteluttu characters, the first being used in Sanskrit passages (*ll* 1 to 30 and *ll* 142 to 150) and in all Sanskrit words that occur in the Tamil portion of the inscription The Grantha characters and orthography do not call for any special remarks except that in almost all conjunct consonants, where they are written one below the other, the upper or the first member of the compound letter is marked by the *virāma*, following evidently the Tamil method of writing The same influence is also observed in the pronunciation and spelling of Sanskrit words, e g, *pārakan* and *purōkan* (*l* 99), *kritāpatānan* (*l* 100) and *kandakanishluran* (*l* 100 f) In one particular case, the purely Tamil word *antanar* (*l* 61) is written partly in Grantha and partly in Tamil The use of *tsha* for *ksha* (*l* 144), *nma* for *tma*, *dma* for *lma* and *ri* for *ri* or *ru*, in compound letters, also shows the same influence Consonants coming after *r* are always doubled except in °मर्ग्ग° in line 14 and °िर्म्म° in line 17 The *upadhmānīya* and *jihvāmūliya* symbols are used throughout in their proper places The *anusvāra* used in -*varggam=yudhi* (*l* 14) and in *samyati* (*l* 28) is worth noticing. It denotes the *anunāsika* forms of *yu* and *ya* and is shaped in the form of a crescent with a dot in it placed over the heads of these letters. In his commentary on Pānini VIII-4-59 Bhattōji-Dikshita remarks that the *anusvāra* in such cases changes itself optionally into the nasal form of *ya*

The Vatteluttu character so called, is an oblique form of Tamil (excepting certain letters) with a few angularities which on careful scrutiny could be easily accounted for The only four letters in the alphabet whose form cannot be explained with reference to Tamil are the vowel letters *i* ($\mathcal{Q}\Upsilon$) (see *irakki°* in line 40), *ai* (ௐ) (see *aimpadinvar* in line 135) and the more frequently occurring *na* ($\mathfrak{z}$ and *po* ௶) In the matter of the Vatteluttu palæography of this inscription it might be noted (1) that the *pulli* is correctly inserted throughout the inscription except in a few cases, e g, *vōli=* (*l* 31), *ettirattum=* (*l* 47 f), *arram* (*ibid*), -*avarku* (*l*. 46) and *vōli°* (*l* 37), (2) that it is unnecessarily inserted over the vocalic *e* and *o* and even

2 s

over the initial vowel letter *o*, as in *mepnum, chchor,* (*l* 34), *korkai, korrap, konda* (*l* 35), *dēy* (*l.* 38), *goli* (*l* 43), *neppun* (*l* 45), *rrennan* (*l* 46), *kkolai, chchoḷiyan* (*l* 50), *olgāda* (*l* 108 f.), *oḍōda* (*l.* 109), *poḥl* (*l.* 65), *pporu* (*l* 63), *poruttāga* (*l* 71), and (3) that it is omitted in a few cases. The shaping of the long *ū*-sign in *rū* (*l* 119), *nū* (*l* 107) and *lū* (*l* 76) and the use of the Tamil *alabedai* (Skt. *pluta*) in *kkoḷiya* in line 97 for the purpose of completing the metrical quantity are worthy of notice. This *alabedai* according to the Tamil grammarians is to be used in (i) selling articles, (ii) calling people at a distance and (iii) in filling up the metrical quantity in a verse. Pāṇini omits (i) and (iii). While in Sanskrit only vowels have *pluta*, in Tamil the consonants (nasals and sibilants) are also thus lengthened.

The orthographical peculiarities such as the insertion of *y* after consonants with the *e*-sign (*ll* 94, 97f.), the substitution of the vowel *i* for *yi* (*ll* 66, 115, 118, 140), the non-observance of euphonic rules in adding the suffixes *um* (*l.* 93), *ul* (*l* 59), *in* (*l.* 93) and *oḍu* (*l* 46 f.), the want of distinction between the long and the short *i* (except in the single instance *nīrōd=atli* in line 117) and between the long and the short *o*, are noteworthy. *Puḥ-ūr* (*l.* 58), °*maiy-iruppai* (*l* 121 f.), *chey-idai* (*l* 122), *mani-imai* (*l* 81), *kkaḥ-araiśan* (*l.* 90), *kurai-uru* and *nirai-uru* (*l* 102) are also cases of the omission of *sandhi*. *Paramēśvarapār-Vēlvikudi* (*l* 110) for °*nāl Vēlvikudi* and *velirpatlu* for *velippatlu* (*ll* 41, 49, 52, 88) are evidently wrong forms, *śekḥun* (*l* 120) for *śeykkun* and *aimpadinvar* (*l* 135) for *aimpadinmar* may be regarded as colloquial usages; similar also may be the use of *kudu* (*l* 125) for *koḍu*. The form *iydu* (*l.* 152) for *idu* through the intermediate form *ihdu* probably gives us the clue for the correct pronunciation of the Tamil *āydam*-sign which is now pronounced as the *jihvāmūlīya* and the *upadhmānīya* forms of the *visarga*. The metre used in the Tamil portion of the inscription is the *Agaval* while in the Sanskrit portion the metres employed are *Vaṁśastha* (vv 1, 12), *Anushtubh* (vv 2, 17, 20 and 23), *Vasantatilakā* (vv. 3, 9 and 19), *Śārdūlavikrīḍita* (vv. 4, 5, 6 and 10), *Mālabhāriṇī*[1] (vv. 7, 8, 15 and 16), *Upēndravajrā* (vv 11, 14), *Drutavilambita* (v 13) and *Āryā* (v 18).

Palæographically, the Grantha characters of the Vēlvikudi grant differ from those of the Madras Museum plates of Jaṭilavarman,[2] although for reasons stated in the sequel, both of these have to be attributed to the period of the same king Neduñjaḍaiyan. The difference is distinctly observed in the formation of the *serif* which in the first case is a plain horizontal line, whereas in the second, it makes a loop with the letter. The bottoms of letters like *ma* and *ba* and the top of the vowel *i* are bent at the base line in the Vēlvikudi grant, whereas in the Madras Museum plates they either form one uniform curve, or are straight, the *upadhmānīya* and the *jihvāmūlīya* signs are not used at all in the Madras Museum plates. The punctuation marks at the end of verses in the Vēlvikudi grant are the *pillaiyār śuḥ* (૨) whereas in the Madras Museum plates they are denoted by the so-called *ōm* symbol (૭)[3], *anusvāras* are more frequent in the Madras Museum plates than nasal conjuncts. The Vēlvikudi grant, in numbering the plates, uses the Grantha letter-symbols, whereas the Madras Museum plates use the usual Tamil numerals. In the Vaṭṭeluttu alphabet employed, however, the two grants do not seem to differ much, except in the case of the letter *ya* which in the Vēlvikudi grant as in the Āṇaimalai inscription,[4] is uniseptate, while in the Madras Museum plates it is bipartite. This single difference in the characters of the Tamil portion which is the earlier, and perhaps constitutes the grant proper in both, need not show that the two grants must belong to different periods. The

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[1] The scheme of this verse as given in the *Chhandōmañjarī* is —
विषमे ससजा यदा गुरु चेत् समरा वेन तु मालभारिणीयम् ॥

[2] *Ind. Ant.*, Vol. XXII, with Plate, pp. 57 ff.

[3] The latest interpretation of this symbol is *siddhiḥ,* 'success.'

[4] Above, Vol. VIII, p. 317 ff.

insertion of the Grantha portion in the Vēḷvikuḍi grant might have been somewhat earlier than that in the Madras Museum plates.

The Sanskrit portion of the record commences with an invocation to Śiva (verse 1) and goes on to refer in general terms to the Pāṇḍya kings and their race, of which the family priest was the sage Agastya[1] (vv. 2 and 3) At the end of the previous *Kalpa*, it is stated, there was a powerful king named Pāṇḍya who was ruling at the entrance into the sea (*i e*, on the coast of a gulf) and that the very sa no king at the beginning of the current *Kalpa* was born as Budha, the son of the Moon (v. 4) His son was Purūravas, and in his family, whose crest was a pair of fish, which shared with Indra, the lord of gods, half of his throne and his necklace and was a party in the purāṇic churning of the milk ocean, was born king Māṟavarmaṉ, a patron of the learned (vv 6 and 8) His son was Raṇadhīra (v 9) and his son Māṟavarmaṉ II Rājasiṁha (vv 10 and 11) at whose presence the king P llavamalla ran away from the battle-field (v. 12). This king Rājasiṁha married a Malava princess and by her begot king Jaṭila (v. 14), who was also called Parāntaka (v. 17) Thus ends the short Sanskrit eulogy (*praśasti*) which was composed by the *Sarvakratuyājin* Varōdaya-Bhaṭṭa (l 30).

We may now pass on to what the bigger and the more important part of the record, the Tamil *praśasti*, has to say, with the remark that the Sanskrit portion, by its brief notice and the very meagre historical material which it supplies in the form of a general introduction, could not have been contemporaneous with the Tamil portion It was evidently added only later to give a dignified appearance to the grant proper which is in Tamil This Tamil portion begins with the mention of a past event, namely, that the *kēḷvi*-Brahmans[2] of Pāgaṉūr-Kūṟṟam seeing that one of their own community, named Naṟkoṟṟaṉ, the headman of Koṟkai, who had contemplated the performance of a Vēdic sacrifice, with the help of the ruling Pāṇḍya king (*ādhirāja*) Palyāgamudukuḍumi Peruvaḻudi, placed his petition before the king and themselves standing in front of the sacrificial hall, blessed that spot to be thenceforth (?) called Vēḷvikuḍi[3] The king granted the village to Naṟkoṟṟaṉ and it was thus that the village came to be enjoyed by the latter for a long time After this, a powerful Kali king, named Kaḷabhraṉ, conquering many *ādhirājas*, brought under subjection the whole Pāṇḍya country including, of course, the village Vēḷvikuḍi which was then resumed. Some time elapsed and after this sprang forth a powerful Pāṇḍya, named Kaḍuṅgōṉ, who reconquered the whole land from his enemies. His son was Avanichūḷāmaṇi Māṟavarmaṉ. His son was Śeḻiyaṉ Vāṉavaṉ Śēndan and his son, Arikēsari Asamasamaṉ Māṟavarman, who won a battle at Pāḻi against his enemies, defeated a certain Vilvēli at Nelvēli; destroyed the Paravas and the people of Kuṟu-nāḍu; won a victory at Śeṇṇilam, conquered the Kēraḷa several times at the strongly fortified town of Puliyūr; made many gifts and protected the Brāhmaṇas and the invalids His son was Śaḍaiyaṉ, the lord of the Koṅga country (Koṅgarkōmāṉ), who was possessed of the titles Teṉṉa-Vāṉavaṉ, Śembiyaṉ, Śōḻaṉ and Madura-Karuṇāṭakaṉ,[4] won a battle at Maruḍūr,

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[1] Agastya is also supposed to have been the founder of the Tamil language and the author of the Tamil grammar *Agattiyam* mentioned in Tamil literature He is referred to as the family priest of the Pāṇḍyas also in Kālidāsa's *Raghuvaṁśa*, VI. 61, and in the commentary on *Iṟaiyaṉār Agapporuḷ.*

[2] *Kēḷvi-andaṇālar* may also mean 'learned Brāhmaṇas'. But *kēḷvi* seems to be used here in a technical sense. In inscriptions we find the word applied to a class of administrative officers whose business was to carry the applications of petitioners to the 'hearing' of the king See also *Ep. Ind*, Vol. III, p. 69, foot-note 7.

[3] *I.e*, the village of the sacrifice In the Tamil portion in l 108 f. it is stated that the village had the name Vēḷvikuḍi given to it by king Mudukuḍumi

[4] The significance of this title is not apparent. Could it be that like Śembiyaṉ and Śōḻaṉ he could have acquired it by conquering the Western Chālukyas who were known as Karnāṭakas? But we know that these were too far away from the reach of the Pāṇḍyas Another possible explanation is that the Pāṇḍyas might have intermarried with the Chālukyas and the issue of such an intermarriage might well be called 'the Sweet Karnāṭaka'! Again, the identification of the Kaḷabhra with Karnāṭa by Mr. Venkayya (see below p. 295) seems to gain in significance in considering the propriety of the title Madura-Karunāṭakaṉ held by king Śaḍaiyaṉ.

defeated Āyavēl in battles at Śengodi and Pudānkōdu, destroyed the Mahārathas at the big
town (*Mahānagara*) of Mangalapuram and stamped the symbols of the bow, the tiger and
the fish on the big mountain, *viz*, the Himalayas This shows his supreme authority over
the Chēra, Chōla and Pāndya countries, whose symbols were the bow, the tiger and the fish,
respectively His son was Tēr-Māran who routed his enemies at Neduvayal, Kurumadai,
Manni-Kurichchi, Tirumangai, Pūvalūr and Kodumbālūr, defeated the Pallava[1] king and
captured his elephants and horses in the battle of Kulumbūr, crushed his enemies at Periyalūr
crossed the Kāviri (*i e*, the river Kāvērī), subdued (the country of) Mala-Kongam, reached
Pāndi-kKodumidi, worshipped Pasupati (*i e*, Śiva), contracted marriage relations with
Gangarāja[2] and renewed the fortifications of Kūdal, Vañji and Kōli His son was Parāntaka
Nedunjadaiyan, who drove the Kādava (*i e*, the Pallava) into the forest, after defeating him
in the battle of Pennāgadam on the southern bank of the river Kāviri and won a battle at
Nāttukkurumbu driving away the Āyavēl and the Kurumbas to the forest This king
possessed a long list of *birudas* such as Śrīvaran, Śina-chChōlan, Puna-pPūliyan, etc,
enumerated in *ll* 98 ff

In the third year of the reign of this last mentioned king, a man having arrived at Kūdal
with a loud complaint, the king himself enquired into the matter with kind words and hearing
from him how his village Vēlvikudi in Pāganūr-kūrram, originally granted under that name
by his ancestor, the great king (*Paramēśvaran*) Palyāgamudukudumi Peruvaludi, was resumed
by the Kalabhra and had since then remained so even after the resumption of Government by
tne Pāndyas, he ordered the applicant to produce the necessary evidence before the *nādu* to prove
that the village was his from early times and thus to get it back The complainant proved
his claim accordingly and the king renewed the grant to the applicant Kāmakkāni Narchingan,
the headman of Korkai The *ānatti* of the grant was Madavikalan Mārangāri *alias*
Mūvēndamangala-Pperaraiyan, the crest-jewel of the Vaidyakas and a native of Karavandi-
pura, and a favourite of the king of kings (*i e*, the Pāndya king Nedunjadaiyan). It is stated
of this Mārangāri that he fought bravely in the fight that ensued between the kings of the
Eastern country (*Pūrva-rājar*) and Vallabha on the occasion when the daughter of Gangarāja
(the Ganga king) was procured for Kongar-kōn

Ll 134 to 141 repeat that the owner of this *brahmadēya* (*viz*, Vēlvikudi) was Kāmakkāni
Suvaran-Singan, the headman of Korkai, by which perhaps the Narchingan, just mentioned,
must be referred to The composer of the Tamil *prasasti* was the *Sēnāpati* Ēnādi *alias* Sāttan
Sāttan. This brings us to the end of the Tamil portion. The next Sanskrit verse speaking
of the *ājñapti* of the grant says that he was Mangalarāja Madhuratara, a Vaidyaka and a
master of the *Sāstras*, a poet and an orator Then follow four imprecatory verses which are
expressly stated to be quoted from the Vaishnava-Dharma. A Tamil prose passage coming
after this says that the king himself ordered the engraving of this copper-plate grant and that
the engraver was a certain Yuddhakēsari Perumbanaikkāran.

In noticing these plates in his *Annual Report on Epigraphy* for 1908, pp 50 ff, Mr Venkayya
has already made it clear how *Kalpa-kshayāt* in v 4 has to be understood with reference to the
traditional account of the deluge[3] or tidal wave in the Pāndya country and to the survival of a
king of the old Pāndya line " of the race of the Moon and in all respects corresponding," under
the name Budha Similarly also, the mythical boast of the Pāndya kings to have engraved their
crest on the top of the Himalayas and to have shared one-half of Indra's throne and worn the
garland of the king of the gods, has been shown to occur frequently in the later Pāndya inscrip-
tions Palyāgamudukudumi-Peruvaludi is a historically famous Pāndya king in whose honour

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[1] The name of this Pallava king, which begins with *Se*, is hopelessly damaged on the impression
[2] Evidently the same mentioned in connection with the next king, his son Nedunjadaiyan.
[3] Old Madura is supposed to have been washed away by the sea see commentary on *Agapporul*, p 4.

five poems are known to have been sung by three famous Sangam[1] poets and included in the Tamil anthology called *Puranānūru*. In one of these he is stated to have captured the extensive forts of his enemies and to have destroyed and ploughed their streets with a team of white-mouthed asses This way of dealing with the conquered countries seems to be a very old one. Dr. S. Konow points out that there is a reference to it in the Hathigumpha inscription of Khāravēla[2] It is mentioned also in some inscriptions of the later Pāṇḍya king Māṟavarman Sundara-Pāṇḍya I The Kalabhra occupation of the Madura country and the consequent interregnum are also noted by Mr Venkayya with the remark that the Kalabhra may be the Karnāṭa. After the interregnum came Kaḍuṅgōṇ with whom the first academy (Saṅgam) of Tamil poets is supposed to have come to an end The list of the kings that followed Kaḍuṅgōṇ to the donor Neḍuñjadaiyan is given in a genealogical table on p 54 of the *Annual Report on Epigraphy* for 1908, together with further information supplied about them by two other sets of Pāṇḍya copper-plates[3] secured from Siṇṇamaṇūr Mr. Venkayya thinks that Neḍuñjadaiyan of the Vēlvikuḍi grant must be different from Neḍuñjadaiyan of the Madras Museum plates published by him in the Indian Antiquary, not only on the strength of certain palæographical differences already noted above but also on account of the different engravers who in the one case was Yuddhakēsari Pāṇḍya-Ppeṛumbaṇaikkūran and in the other, Pāṇḍi-Pperumbaṇaikkāran alias Arikēsari He further identifies Neḍuñjadaiyan of the Vēlvikuḍi plates with Māṟañjadaiyan of the Ānaimalai cave inscription, for, between these two there is not only palæographical similarity, but also it happens that the *ajñapti* of the former is the prime minister mentioned in the latter, both being called Mārangāri Mūvēndamangalappēraraiyan, members of the Vaidya (or Vaidyaka) family and natives of Karavandapura with the attributes *Maduratara* and *Kavi* Consequently, the two kings Neḍuñjadaiyan and Māṟañjadaiyan, who both bore the same surname Parāntaka, must be identical and the date of the Vēlvikuḍi grant must be about A D. 769-70 which is the date of the Ānaimalai inscription.

About the military achievements of Neḍuñjadaiyan we learn from this inscription that he defeated the Kādava king at Pennāgaḍam on the southern bank of the Kāvēri river and grove the Āyavēl and the Kuṟumbas in a battle fought at Nāṭṭukkuṟumbu Again, a statement made about the *ajñapti* of the grant in lines 126-129, adds that Mārangāri rendered valuable service to his master Neḍuñjadaiyan by defeating a certain Vallabha at Veṇbai, on the occasion when the eastern kings secured the hand of the Gaṅga princess in marriage for Kongarkōn. Here Kongarkōn in order to suit the context, must be taken to be a surname of the Pāṇḍya king Neḍuñjadaiyan himself. This is not improbable, inasmuch as his grandfather Śadaiyan is also called in the inscription (Text, l. 70), Kongarkōmān, and his father Tēr-māṟan is stated to have contracted relationship with the Gaṅga king (Text, l. 84) This latter event perhaps refers to the occasion when Mārangāri achieved the success mentioned above.

In spite of what Mr. Venkayya thinks about the identity of the kings mentioned in the Vēlvikuḍi plates and the Madras Museum plates there are strong reasons to believe that both refer to the same king. For, the ruling king Parāntaka Neḍuñjadaiyan and his *birudas* Paṇḍi-tavatsala, Vīrapurōga and Vikramapāraga occur in both Further, the surname Śrīvaramangala given to the granted village Vēlanguḍi in the Madras Museum plates makes it clear that the king must have also had the *biruda* 'Śrīvara' which we find actually given to him in the Vēlvikuḍi plates[4] The special mention of Mūrti Eyinan in l 136 of the Vēlvikuḍi plates as

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[1] According to tradition there were three *Sangams* or old academi s of Tamil Poets The date of the last of these has been widely discussed The latest pronouncement on the subject is that it must have come into existence some time after the 5th Century A. D

[2] *Acta Orientalia*, Vol 1, Part I, p. 23f.

[3] These plates are under publication by me in the *Epigraphia Indica*.

[4] Mr K V Subrahmanya Ayyar also supposes it to be so, *vide* his *Sketches of Ancient Dekhan*, pp 103 ff.

one of the fifty Brāhmaṇa sub-donees marks him out as an important personage. From the Ānaimalai inscriptions, we know that Eyinan was an epithet or surname held by Māraṇ Eyinan, the younger brother of Mārangāri himself. Perhaps Māran Eyinan and Mūrti Eyinan were both younger brothers of Mārangāri The *ājñapti* of the Madras Museum plates was Dhirataran Mūrti Eyinan, who was one of the *mahā sāmantas* of the king. There is little doubt that Mūrti Eyinan of our plates and Dhirataran Mūrti Eyinan of the Madras Museum plates are identical and that thus also the king Neduñjadaiyan mentioned in both these sets of plates is one and the same If this identification is accepted the two allied plates together supply the full list of the military exploits of Neduñjadaiyan By the third year of his reign (the date of the present grant) Neduñjadaiyan must have subdued the Āyavēl and the Kurumbar and defeated the Pallavas south of the Kāviri; but before his 17th year (the date of the Madras Museum plates) he had carried his conquests right into the heart of the Kongu country and taken possession of it by defeating its king Adiyan and his allies the Pallavas and the Kēralas The conquest of the Kongu country and the desire to possess it seem to have been very strong with the Pāndya kings For, Sadaiyan, the grandfather of Neduñjadaiyan, held the title 'Lord of the Kongas' and his father Tēr-Māran actually crossed the Kāviri, subjugated Mala-Kongam and had invaded that country even as far as Pāndi-kKodumudi. Neduñjadaiyan seems only to have followed in the footsteps of his ancestors in subduing the Kongabhūmi, as far as the land of the Gangas The information that a Ganga princess was married into the Pāndya family is not mentioned in any of the Ganga records of this period which falls into the reign of Śivamāra I (755 to 765 A D). The Vallabha or the Western Chalukya king who was defeated on this marriage occasion was probably Kirtivarman II who succeeded to the Chalukya throne in A D 746 or 747 and whose army is stated in his records to have defeated the army of the Kēralas, the Chōlas and the Pāndyas

From what is stated of the countries of Kongu and Kērala in these inscriptions of Neduñjadaiyan, it is not difficult to see that the former was bounded on the east and perhaps also on the north by the land of the Gangas—the Gangavādi 96,000 of the Western Gangas of Talakād and that on the south it extended far beyond Kodumudi, as even to cover the northern portion of the later Rājasarya-Valanādu of the Chōlas which included in it the present Musiri and the Trichinopoly talukas Coimbatore was in the western division of the Kongu-mandalam The king of the Northern (*vada*) Kongu was Adiyan[1]—the Adigaimān or Adiyamān of later inscriptions whose capital was at Dharmapuri, the ancient Tagadūr, in the Salem district The Kērala country was situated on the west coast beyond the Sahyādri mountains and may have included also the southernmost portions of the present Coimbatore district In the 8th century, therefore, it looks as if the Kongu king allied himself with the Pallavas in the north and the Kēralas in the south and tried to oppose the invasion of the Pāndya Neduñjadaiyan The Vallabha was defeated by the Pāndya general and a Ganga princess was married into the Pāndya family perhaps as a political measure It is stated that Pūrvarājar put to flight Vallabha. Mārangāri also fought on the same occasion Perhaps the Pūrvarājar were the chiefs of Gangavādi subordinate to the Western Ganga king who contracted marriage relations with the Pāndyas

Mr. Venkayya observes again in his Epigraphical Report that the title Arikēsari occurring in text-line 62, was borne by a certain Nedu-Māran who is mentioned in the commentary of Nakkirar on *Iraiyanār-Agapporul* This latter work, as tradition says, was made available for the public by Nilakandanār of Musiri eight generations, i e, about two hundred years, after the actual date of Nakkirar Mr Venkayya seems to have gone wrong in identifying Nedu-Māran of literature with Tēr-Māran of the Vēlvikudi plates where, however, the characteristic title Arikēsari is not given to him The other titles, too, are not applied to him and the

battles fought by him as described in the commentary under reference, are not found in the eulogy of Tēr-Māran given in the Velvikudi plates. On the other hand, Maravarman, the great grandfather of the donor Neduñjadaiyan is not only called Arikēsari but is also stated to have fought victorious battle at Pali, Šennilam and Nelvēli which same are mentioned of him in the commentary on the Iṟaṇiyār[1] This mention, therefore, of the very same battles both in the plates and in the commentary, sufficiently warrants our identifying Nedumāran of the commentary with Maravarman, the great grandfather of Neduñjadaiyan and not with Tēr-Māran Nal-kinai who sang also of Neduñjelyan in Puṟanīṟṟu, and it is not impossible that this Nedunjelyan is identical with Šelvan, the father of Arikēsari Maravarman

Of the six ancestors of Nedunjadaiyan mentioned in the Tamil portion of the inscription and the three immediate ancestors mentioned in the Sanskrit portion, we learn nothing more than that the first king Kaunrēn who came to rule after the Kalabhra interregnum was a Pāndy-ādhirāja,[2] that the next Maravarman bore the title Avanichūlāmani and that the third Šendan, also called Šelvan and Vānavan, was probably identical, as stated above, with Nedunjelyan of the Puṟanīṟṟu fame. The fourth king, whose military achievements are given in detail, was Šrī-Vīravarman Arikēsari Asamasaman, who in addition to the victorious battles mentioned already destroyed the Paravas and the people of Kuṟu-nādu. The fifth Sadaiyan also called Rāṇadhira, was the lord of the Kongas, fought battles against the Āyavēl at Marudūr and with the Mahārathas at Mangalapura; and the sixth, Tēr-Māran or Rājasimha, defeated Pallavamalla, perhaps at Kulumbūr, and fought battles at Neduvayal, Kuṟumadur, Marandurichchi, Tirumangai, Puvalūr, Kodumbālūr and Periyalūr and subjugated the country of Mala-Kongam as far as Pāndi-kKodumidi. He contracted relationship with Gangarāja, marrying the daughter of the Ganga prince to his son Neduñjadaiyan, himself having married the daughter of the king of the Malavas.[5] The fact that he defeated Pallava-malla shows that Tēr-Māran must have been a contemporary of that king and lived about A D 710-760[4]

As regards the territorial terms and village names that occur in the inscription, Pāganūr-kūṟṟam is identical with the division of that name in which the village Šolavandān near Madura was included[5] Malava is identical with Mala-nādu[6] Kuṟu-nādu, and the granted village Velvikudi, and the villages Nagarūr, Koṟṟanputtūr and Pāyal mentioned in the description of the boundaries of the latter cannot be identified. Korkai is the well-known seaport of that name in the Tinnevelly District. Of the villages Nelvēli, Šennilam, Palliyūr (in Kērala), Marudūr, Mangalapura, Neduvayal, Kuṟumadai, Mappikuṟichchi, Tirumangai, Pūvalūr, Šengudi, Padāngōdu, Kodumbālūr, Kulumbūr, Periyalūr, Pāndikkodumidi, Kūdal Vañji, Koli, Pennāgadam, Nāttukkuṟumbu, Karavandapuram and Venbai,—Nelvēli is Tinnevelly;

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[1] Ibid., pp 129 ff

[2] Describing the several grades of rulers, the Kāmikāgama states that an adhirāja—ādhirāja is the form which the inscription uses throughout the Tamil portion—holds the second rank among kings —

चतुस्समुद्रपर्यंतं पृथिवीं य प्रपालयेत् ।
चक्रवर्ती समाख्यातः समराज्य प्रपालयेत् ॥
अधिराजश्चसमाख्यात.

(Hindu Iconography, Vol I, Part I, p 29 n)

[3] Malava is identical with the old Mala nādu or Rājāsraya Valanādu (see S. I I, Vol II, Introduction, p. 24, and Historical Sketches of Ancient Dekhan, p 129)

[4] Udayachandra, the general of Nandivarman Pallavamalla, also claims in the Udayēndiram grant to have defeated the Pāndya at Mannaikkudi (S I I, Vol II, p 368, Text, l. 60 f) Perhaps we may have to identify Mannaikkudi with Mappikuṟichchi which is mentioned in the Tamil portion (Text, l. 73 f) as one of the places where Tēr-Māran was victorious

[5] No 127 of the Madras Epigraphical Collection for 1910.

[6] See above note 3.

Marudūr is perhaps Tiruppudaimarudūr near Ambāsamudram, Mangalapuram of the Mahārathas might be Mangalore; Kodumbālūr is in the Pudukkōttai State, Pāndikkodumidi is the village Kodumudi near Karūr a station on the South-Indian Railway, Kūdal is Madura; Vañji is Karūr[1], Kōli is Woraiyūr near Trichinopoly, Pennāgadam is in the Tanjore District, and Karavandapuram is the modern Kalakkād in the Tinnevelly District.

<div align="center">

TEXT.[2]

First Plate.

Svasti[3] [||*]

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1　Śriyañ=chiram vaś=śiśu-āṁśu-śēkharaś=Śiva[h*] śrit-ārtti-pratibandha-kāraṇam [|*] tanōtu sauvarnna-kapa-

2　rdda-sundaraḥ=kudarppa-Kandarppa-mada-pramarddanaḥ ౨ [1*] Viśvambharā-bhara-śrānta-śēsha-viśrama-kāraṇam [1*] ā-

3　kalp-āntam=bhuvi sthēyād=anvayaḥ=Pāndya-bhūbhritām ౨ [2*] Astambhayat=kshiti-dharam=pravijṛimbhamānam=ambha-

4　s=samastam=apibaj=jaladhīś=cha yas=saḥ [|*] Kumbh-ōdbhavō bharati yasya muniḥ=purōdhās=sa śrī-nidhi-

5　r=jjayati Pāndya-narēndra-vaṁśaḥ ౨ [3*] Āsīd=apratima-prabhāva-mahitaḥ=Pāndy-ābhidhānō nidhē-

6　r=vvārādhvāri[4] mahīpatis=tribhuvanē linē=pi kalpa-kshayāt [|*] Dhātrā sṛishṭa-vatā punas=sa

7　jagatāṁ rakshārttham=abhyarthitas=tējasvī tanayatvam=ētya śaśinō nāmnā Budh=ākhyō=bhavat ౨ [4*]

<div align="center">

Second Plate, first side.

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8　Putras=tasya Purūravā bhuja-bala-pradhvasta-daityaḥ=prabhus=tad-vaṁśē Sikharīndra-mastaka-śi-

9　lā-vinyasta-matsya-dvayē [|*] Śakr-āiddh-āsana-hāra-bhāji śaraṇē viśrasya viś-vambharā-gēha-

10　svāmin ēāśvatē yudhi jit-āśēsh-āmar-āri-prabhau ౨ [5*] Dūtībhūta-divōkasi[5] kshitidhara-kshu-

11　bdh-ābhisamī-śōbhita-kshīr-ōdanvati Kumbha-sambhava-kara-prāpt-ābhishēka-kriyē [|*] ishṭ-ārtth-ārppaṇa-

12　tarppit-ārtthi-janat-āpūrṇṇa-kshamā-mandalē janm=āvāpa jaga[6]-tray-ārchchita-guṇa[h*] śrī-Māravarmmā nri-

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[1] Pandit Raghava Aiyangar of Ramnad has proved from copious references to literature that the earliest Vañji is Karūr. But an inscription at Dhārāpuram mentions the town Kongu-Vañji, suggesting thus, another Vañji which was perhaps the earlier and the capital of Chēra.

[2] From two excellent impressions supplied by Dr Fleet to Mr. Venkayya in 1898 and another supplied by Dr L D Barnett to me in 1915.

[3] These two syllables are written on the left margin of the plate.

[4] Read *vvārān=atāri*.　　[5] Read *-divaukasi*.　　[6] Read *jagat*-.

13 Pah 𑀨 [6*] Dharani-valayam samastam=ētan=nija-dōrddanda-mah-ōrag=pa
bibhrat¹ [l*] aharat=sa bhu-

14 jrmgam-ādhibhartuŝ=chira-kāl-ōdvahana-klaman=dharāyāh 𑀨 [7⁶] Adhiruhya
tulām=a-mitra-varggam=yudhi ji-

Second Plate , second side

15 ti=Āmrita-garbbhatō janitrā [l*] sudhiyām=adhipas=suvarnna-rāŝim vidhivat=sa
prat·pādayām-babhūva [𑀨 [8*] Tasy=ā-

16 ²nmajis=taruna-bhāskara-tulya-tējā rājā babhūva Ranadhīra iti pratītah [l*]
jō lilay=aiva bhuvana-

17 sya babhāra bhāram hāram yath=āsya guravas=suranāyakasya 𑀨 [9*] Putras=
tasya Purandara-pratikritir=bhū-

18 sundari-vallabhō namr-āŝisha-narēndra-vēshtana-mani-viāt-āvrit-āmghri-dvayah[l*]
āsit=satya-sakhah=pa-

19 rākrama-dhanah=°patmāsanāyāh=patir=vvidy-āchāra-vibhūshana[h*] śruta-[dha]ra[h*]
śri-Māravarmm=ābhidhah 𑀨 [10*] Sa Rāja-

20 simbas=sarasiruh-ākshō bhayam bhuvi prāna-bhritām=apāsya [l*] raraksha
dakshah kshapit-āri-paksha-

21 ⁴li=kshamātalam kshmū-patir=akshat-ājñah 𑀨 [11*] Narō nu Rakshō nu Harō-
nu Pūrushah=paiō nu Sakrō nu

Third Plate , first side

22 sarōsham=āgatah [l*] iti [sma] matvā yudhi yam=bhay-ā[rddi]tah=[pa]lāyatō
[Pallava]malla-bhūpa-

23 tih 𑀨 [12*] Kanaka-garbbha-krita-prasavah=punas=samadhiruhya tulām=atulām=
api [l*] akira[t=ā]-

24 rittham=apākrita-kalmashō dvija-daridra-sur-āyatanō=shu yah 𑀨 [13*] Māhā⁵-
kulīnām=Malav-ēndra-[ka]-

25 nyām sa Māravaimnā sadraŝīm⁶=uvāha [l*] ajāyat=āsyām Hara-sūnu-kalpō
jagad-dhitārtthañ=Jati-

26 l-ābhidhānah 𑀨 [14*] Aŝishat=sa dharām=ahīna-sārah=kshitipah=kshālita-⁷
kalmash-ānushamgam [l*] nata-rā-

27 jaka-mauli-ranna⁸-raŝmi-prakar-ābhyarchchita-pāda-patma⁹ pīthah 𑀨 [15*] Khalayē
sa gunān=adāt=Kritasya

28 sva-bhujābhyām sura-pādapa-svabhāvam [l*] abhayam śaranāgata-prajābhyas=sa
divam samyati śa-

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¹ Read *bibhrat*	² Read °*tmaja*°	⁸ Read °*padmā*°
⁴ Read *pakshah kshamā*°	⁵ Read *Mahā-*	⁶ Read *sadriŝīm=*
Read *kshitipah kshā*°	⁸ Read *ratna.*	⁹ Read *padma.*

Third Plate , second side.

29 tru-pārtthivcbhyah ⊙_ [16*] Rājatām sa mahīpāla-kirīt-ārppita-śāsanaḥ [|*] Rājasimha-sutō rū-

30 jā chiram=urvyām=Parāntakaḥ |||||— [17*] I-praśasti Sarvvakratu-yāji āgiya Varōdaya-Bhattanār=che-

31 yyappattadu | ||||— Kol-yānai-palav=ōṭṭi-kkūḍā-maṇṇar-kulān=tavi-

32 rtta Palyāga-Mudukudumi=pPeruvaḷudi ennum Pāṇḍyādhirājaṇā=

33 nāga-mā-malar-chchōlai-naḷir-śiṇaimiśai-vaṇḍ-alambum Pāganūr-

34 kkūṟṟam¹=ennum paḷaṇa-kkidakkai-nīr-nāṭṭu=chchoṟkaṇṇūlar-śo-

35 lappaṭṭa śrutimārggam-piḷaiyāda Koṟkai-kiḷā=Naṟkoṟṟaṇ koṇ-

36 da vēlvi muṟṟuvikka kēḷvi-andaṇālar munbu kīṭka eṇṟ=edut-

Fourth Plate , first side

37 t=uraittu vēlviśālai-muṇbu niṇṟu Vēlvikudi eṇṟ=a-ppadṛyai=chchī-

38 rōdu tiru-valara=chcheydār [||*] Vēndaṇ=appoḷudēy nīrōḍ=atti-kkoduttamai-

39 yā=ṇidu-bhukti ²tuttapiṇ[|*]=Alav-ariya ādhirājarai agala nīkki agal-idattai=

40 kKalabhraṇ=eṇṇuṇ=Kali-araiśaṇ kaikkoṇd=adaṇai iṟakkiyapiṇ[||*] Padu-kadaṇ-mulai

41 tta parudi-pōla Pāṇḍyādhirājeṇ veḷippaṭṭu vidu-kadir-avir-oḷi vilaga viṟṟi-

42 rundu vēlai-sūḷnda-viyal-idattu=kkōvun=kurumbum pāvudaṇ murukki=chche-

43 nkōl=ōchchi ven-kudai-niḻeṟ-ṟang-oḷi-niṟainda Taraṇi-maṅgaiyai=ppiṟaṟ-

44 pāl=urimai tiravidi=ṇikki=ttaṇpāl=urimai naṇgaṇam-amaitta māṇam-pē-

45 rtta-tāṇai-vēndaṇ=oduṅgā-maṇṇar-oḷi-nagar=aḷitta Kaduṅgōṇ=eṇṇun=kadi-

46 r-vēṟ-Beṇṇaṇ [||*] Maṟṟ=avaṟku magaṇ-āgi mahītalam podu-nīkki Malar-maṅgai[y*]-o-,

Fourth Plate ; second side

47 du maṇaṇ=ayarnda aṟṟam-il-adar-vēṟ-ṟāṇai-Ādhirājaṇ Avaṇichūḷāmaṇi etti-

48 ṟattum=igal-aḷikku=matta-yāṇai Māravarmmaṇ [||*] Maṟṟ=avaṟku maruv=iṇiya oru-magaṇ-ā-

49 gi Maṇ-magalai maṟu=kkadindu vikramattiṇ veḷippaṭṭu viḷaṅgal-vēl-po-

50 ri-vēndar-vēndaṇ śilai-ttaḍa-kkai=kkolai-kkaḷiṟṟu=chCheḷiyaṇ Vāṇavaṇ

51 śenkōṟ-Chēndaṇ [||*] Maṟṟ=avaṟku=ppaḷipp-iṇṟi vali-ttōṉri Udayagiri-madhyama-

52 tt=uṟu-śudar-pōla=ttēṟṟ-eṇṟu diśai nadunga maṟṟ=avaṇ veḷippaṭṭu=chchū-

53 ḷi-yāṇai śelav=undi=pPāḷivāy=amar-kadandu Vilvēḷi-kkadar-ṟāṇaiyai

54 Nelvēḷi-chcheru veṟṟum virari-vand=adaiyāda Paravarai=ppāḷ-padut-

55 tum=aṟukāl-iṇam pudai tiḷaikkun=Kuṟunāttavar-kulan=keḍuttu-

56 ā=kai-nnalatta-kaḷiṟ=undi=chChennilattu-chcheru veṟṟum pār-alavun=

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¹ The *puḷḷi* is marked over *ṟai*   ² Read *tuytta°*.

vi b

vii a

vii b

viii a

viii b

F. W. THOMAS   SCALE ONE-HALF   WHITTINGHAM & GRIGGS PHOTO LITH
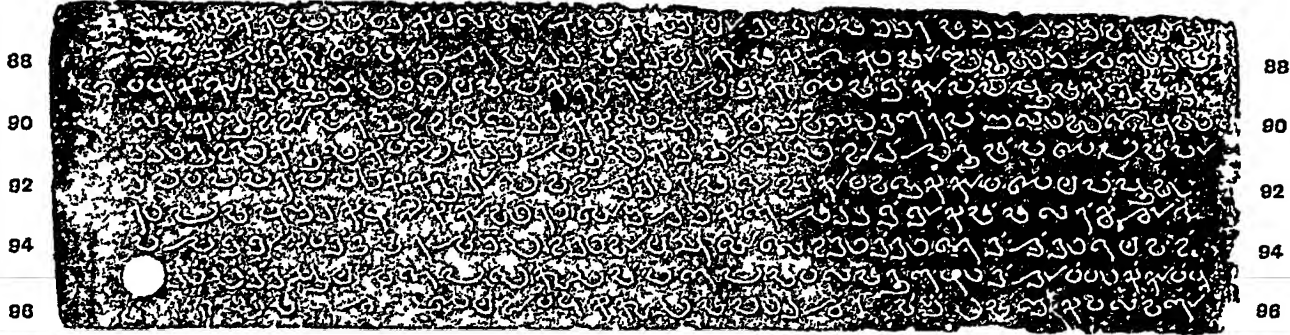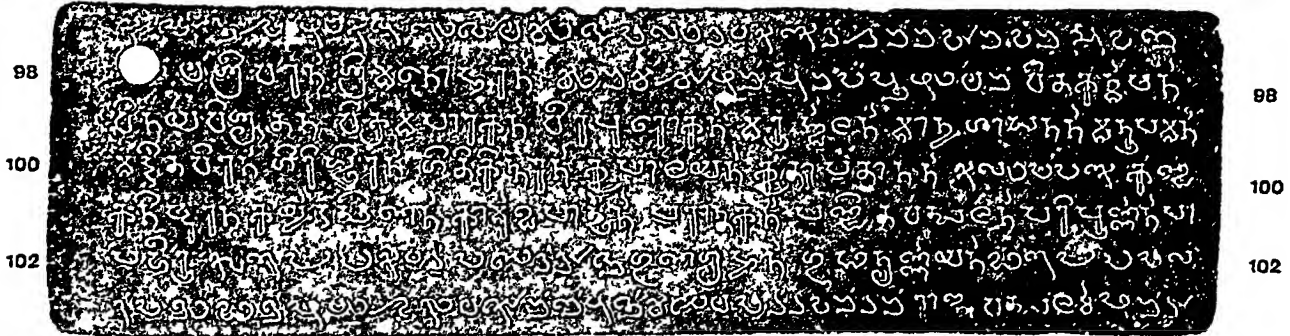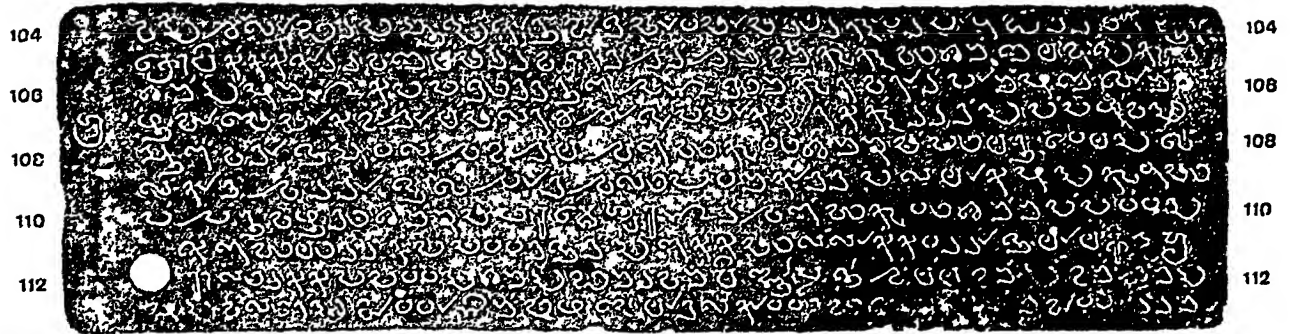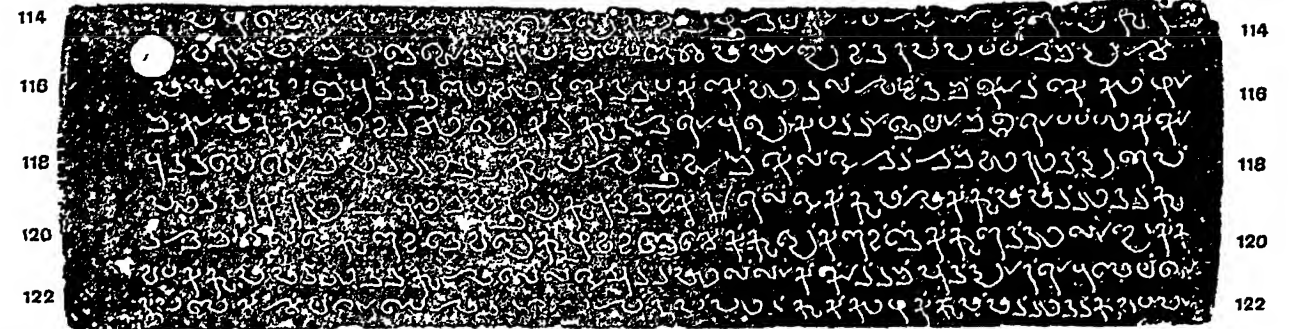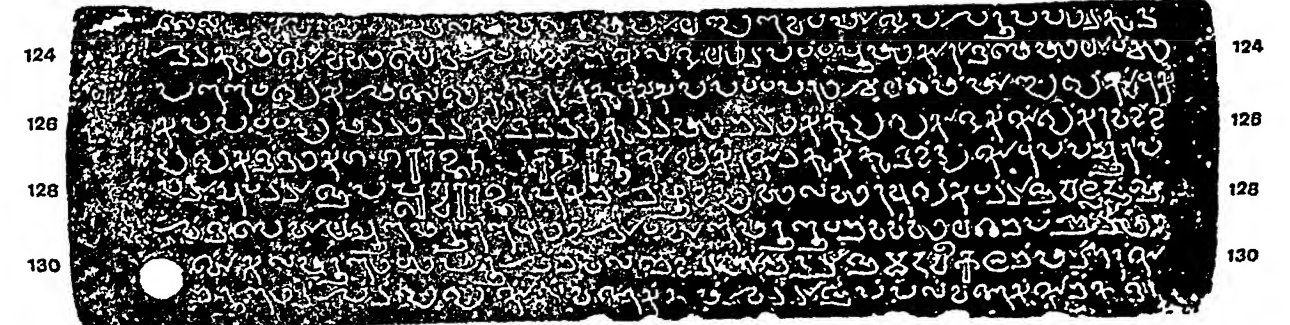
Fifth Plate ; first side.

57 [ta]nı-ohchenkōṛ-Kēṛaḷaṇsı=ppala-mu[ṛaıyum=urıṃaı]-ohchuṛṛam[ōḍ=avar-yā]ṇaı·

58 [y*]um purıśaı-mmadıṛ-Palı[y*]ūr=ppaga-nāḷıgaı ıṛa[v]āmaı ıṛa[l-ā]·

59 ḷı[y*]aı veṇṛu kondam vōl-āḷı[y*]um vıyaṇ-paṛambum=ēlāmaı śeṇ-

60 ṛ=eṛınd=aḷıttum Hıraṇyagarbhamun=Tulābhāramun=daraṇımıśaı=ppala śey[du]

61 antaṇarkkum aśaktarkkum vṛnd=aṇaıga enṛ=ıtt=aḷıtta makarıkaı-aṇı-maṇı-

62 neḍu-muḍı-Arıkēsarı Asımasaman śrī-Māravarmman [||*] Maṛṛ=avaṛku magaṇ-
    āgı=kkoṛṛa-vō-

63 l valaṇ-ōndı=pporud=ūrun-kadaṛ-ṛāṇaıyaı Marudūrun māṇb-aḷıtt=Āyavē-

64 laı agappıḍa ey=eṇnāmaı eṛınd=aḷıttu=chChengoḍı[y*]um Pudāṇ[kō]t-

65 tuñ=cheru veṇṛ-avar-śıṇan=tavırttu=kkoṇg-alarun-naṛum-poḷılvāy=kku-

66 [y*]ı[lo]du ma[y*]ıl=agavu=Mangalaṇuram=eṇṇum mahā-nagarun Mahāratharaı e-

Fifth Plate , second side

67 ṛınd=aḷıtt=aṛaı-kadal-valāgam podu-moḷı agaṛṛı=chchılaı[y*]um pulı[y*]um

68 kayaluñ=chenṛa nılaıy-amaı-nedu-varaı-ıdava[y*]ır=kıdēy maṇṇ=ıṇıd-āṇḍa

69 taṇṇ-alı-chchenkōṛ-Reṇṇa=Vānıvaṇ Śembıyaṇ Śōḷan maṇṇar-maṇṇa[ṇ*] madu-

70 ra-Karuṇūḍagaṇ koṇ-ṇavıṇṛa neḍuñ-chuḍar-vēṛ-Kongar-kōmāṇ kō=chChadaıyaṇ
    [||*]

71 Maṛṛ=avaṛku putraṇāy Maṇ-magaladu poruṭṭāga matta-yāṇaı śelav=undı māṇa-

72 vēl valaṇ-ōndı=kkadu-vıśaıyāl=edırndavaraı Neduvayalvāy nıgar=aḷı-

73 ttu=kkaṛuv-adaında maṇattavaraı=kKuṛumaḍaıvāy=kkūrpp=aḷıttu Ma-

74 nnıkuṛıchohı[y*]un=Tırumangaı[y*]u=munṇıṇṛavar muraṇ=aḷıttu mōvalō-

75 r-kadaṛ-ṛāṇaı[y*]ōḍ=ōṛṛ=edırōy vandavaraı=pPūvalūr=ppuṛan-gaṇḍun=

76 kodum-purıśaı-nnedun-kıdangıṛ-Kodumbāḷūr=kkūḍār-kadum-parı-

Sixth Plate , first side

77 [y*]un=karun-kaḷıṛun=kadır-vōḷıṛ=kaıkkonḍuñ-Chēva [kū]dāda Pallavaṇaı=k

78 Kuḷumbūruṭ=ṭēś-aḷıya eṇṇ-ıṛanda māl-kaḷıṛum=ıvu[lıga]lum pala kavarn-

79 dum tarıyalarāy=ttaṛıttavaraı=pPerıyalūr=ppıḍ-aḷıttum pūvırı[y*]u-

80 m-poḷıṛ-chōlaı-kKāvırıyaı=kkaḍandıtt=aḷag-amaında vāṛ-śılaı[y*]ıṇ Mala-Ko-

81 ngam=adıppaduttu mīnd=oḷıya-maṇı-ımaıkkum=eḷıl-amaında neḍum-pu-

82 rıśaı=pPāndıkkoḍumıdı śeṇṛ=eydı=pPaśupatıyadu panma-pādam paṇınd=ō-

83 ttı=kkanaka-rāśı[y*]un=kadır-maṇı[y*]um mana-magṇḷa[1]=kkuduttaṭṭun=konga-

84 r-van-naṛuā-kannı-kGanga[2]-rājaṇodu sambandhañ=cheydum eṇṇıṛandaṇa Ga-

85 sahasramum Hıraṇyagarbhamun=Tulābhāramum maṇṇıṇmıśaı=ppala śeydu ma-

86 ṛaı-nāvıṇōr kuṛaı-tīrttun=Kūdal Vañjı Kōḷı eṇṇu=māḍa-mē-madı-

Sixth Plate , second side

87 l pudukkı[y*]um=aṛaı-kadal-valāgan=kuṛaıyād=āṇḍa maṇnar-maṇṇa[n*]=Reṇṇavar·
    maruga-

88　ṉ māna-ven-kudaimāṉ=Rēr-Māran [||*] Maṟṟ=avaṟku magan-āgi Māl-uruviṉ velippa-
89　ttu=kkoṟṟa-mūṉr=udaṉ=iyamba=kkuḷir-ven-kudai maṉ kāppa Pū-magaḷum Pu-
90　la-magaḷum Nā-magaḷuṉ=nalaṉ=ētta=kKaḷi-araiśaṉ vaḷi talara=ppoḷivinodu vi-
91　ṟirundu karuṉ-kadal-udutta perungaṇ-ñālattu nēṟ-perum-padai[y*]um pā-
92　ṟpada=pparappi=kkarudādu vand=edir-malainda Kādavaṇai=kkād-adaiya=ppū-vi-
93　ri[y*]um-punaṟ-kaḷani-kKāviri[y*]iṉ=ṟenkaraimēṟ-ṟann-āgam-malar-chchōlai-
94　pPennāgadatt=amar venṟuṉ=tī-vāy-a[y*]il=ēndi-ttilaitt=edirēy van-
95　d=iṟutta Āyavēlai[y*]uṉ=Kurumbarai[y*]um=adal-amarul=aḷitt=ōṭṭi=kkāttu-
96　[k]kuṟumbu śeṉr-adaiya Nāttukkuṟumbiṟ=cheru v[e]ṉṟum=aṟai-kadal-valā-

Seventh Plate, first side

97　gam=oru-moḷi=kkoḷiya śilai-maḷi-tada-kkai Tenna=Vānavan avanē-
98　y Śrīvaraṉ Śrī-manōharan Śinachchōlan Punappūliyan vitakanmashan[1]
99　vinayaviśrutaṉ[2] vikramapārakan vīrapurōkan marudbalan mānyaśāsanan Manūpaman
100　marddhitavīran giristhiran gītikinnaran kṛpālayan kṛtāpatānan Kaḷippagai
　　　kaṇḍa-
101　kamishturaṉ[3] kāryadatshinaṉ[4] kārmukha[5]-Pārtthan Parāntakan Panditavatsalan
　　　paripūrnnan pā-
102　pabhīru kurai-uṟu-kadar-padai-ttānai- gunagrihyan gūdhanirirnnayan[6] nirai-uṟu-mala-
103　r-mani-nīn-mudi-Nēriya[r*]kōṇ=Neduñjadaiya[n*] [||*] Maṟṟ=avaṉṟaṉ rājya-
　　　vatsalam[7] mūṉṟā-

Seventh Plate, second side

104　vadu śelāniṟpa āṅg=oru-nāṉ=māda-mā-madiṟ-Kūdaṟ-pādu niṉṟavar ā-
105　krōdhikka=kkoṟṟavanēy maṟṟ=avarai=tteṟṟeṉa nangu kūvi ennēy nuṉ=kuṟai
106　eṉṟu muṉṉāga=ppaṇitt-aruḷa mē-nā=nin-kuravaraṟ=pāṉ-muṟai[y*]iṉ va-
107　ḷuvāmai māgan-tōy=malar-chchōlai=pPāganūr-kkūṟṟattu=ppaduvadu
108　ālva-tāṉai-adal-vēndēy Vēlvikuḍi eṉṉum piyar-udaiyadu o-
109　lgāda vēṟ-ṟāṇai[y*]od=ōda-vēḷi udaṉ kūtta Palyāga-Mudukuḍumi-
110　pPeruvaḷudi eṉṉum Paramēśvāraṉaṟ[8] Vēlvikuḍi ennappaṭṭadu
111　kēlviyiṟ=ṟarappaṭṭadaṉai=ttulakkam-illā kadaṟ-ṟāṉaiy=āya Kalabhra-
112　rāl=iṟakkappaṭṭadu eṉṟu ṉiṉṟavaṉ vijñāpyañ=cheyya nanṟu naṉṟ=eṉṟu
113　muṟuvalittu nāṭṭā=ṉiṉ paḷamaiyādal kāṭṭi nī [kolgav=eṇ]na nāṭṭ[ā]ṟ=ṟaṉ

Eighth Plate, first side

114　paḷamaiyādal kāṭṭiṉāṉ=aṅg=appoḷudēy kāṭṭa mē-nāl=e[n]-kura-
115　varāṟ=pāṉmuṟai[y*]iṟ=ṟarappaṭṭadai emmāluṉ=tarappaṭṭad=enṟu śe-
116　mmānd=avaṉ=edutt-aruḷi viṟ-kai-ttada-kkai-viral-vēndaṉ Koṟkai-kiḻa-
117　ṉ Kāmakkāṇi Narshingaṟku=ttēr-ōduṉ-kadaṟ-ṟāṉaiyāṉ=pīrōd=aṭṭik[ko]-
118　duttamai[y*]iṉ maṟṟ=idaṟku=pperu-nāṅg-ellai teṟṟeṉa viṟitt=uraip-
119　piṟ=pugar-aṟu-poḷiṉ=maruṅg=udutta Nagarūr-ellaikkum mēkkum maṟṟ=idaṟku=

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　　　¹ Read °kaimashan
　　　³ Read °mishṭhuran　　　² The original has the impossible combination °viśrutan
　　　⁶ Read gūdhavirnayan.　　　⁴ Read °kāryadal-shinan　　　⁵ Read kārmuka°.
　　　　　　　　　　　　　　　⁷ Read °vatsaram　　　⁸ Read nāḷ.

120 tt[e]n ellai Kulandaivan-Kūḷvandai-śe[y*]kkun=Kalandai-kkulatthi=ālukk[u]
121 vadakkum maṟṟ=idaṟku mēl-ellai aṟṟam-illā=kKoṟṟaṇputtū(r)r-Odumaiy-i-
122 ruppai-chchey-idai mōṟṟalai=ppei uppiṟku=kkiḷakkum maṟṟ=idaṟku vadapā-

Eighth Plate , second side

123 l-el[lai kāya]lut=kamalam malarum Pāyalul vadapālai=pperuppiṟku=t-
124 teṟkum ivv=iyait[ta*] peru-nāng-ellaiyir-paṭṭa pūmi kārāṇmai mīyātchi
125 nīl-adanga mīl=en-guravai āṟ=kudukkappaṭṭa paiśōy emmālan=[ko]duk-
126 kappaṭṭadu [||*] Maṟṟ=idaṟk=ānatti kuṟṟam-iṉṟi=kkūrunkālai=kkongar-van-na-
127 ran-kanni-¹kGangarājaṇidu kanyā-ratnam Kongarkōṟku=kkunandu koduppa ārp-
128 p-aṟū-adaṟ-ṟāṇai-pPūrvvarājar puganṟ=elundu vil-viiavun=kadaṟ-ṟāṇai-[Va]llabhanai
129 Veṉbaivāy āl-amarull=aḷind-ōda vāl-amarul=udaṇ-vavviya ēna-ppoṉ²
130 igal-amarul=idi-urum-eṇa valaṇ-ōnda [malai]tta-tūnai-Madavīkalaṉ³ mannar-kō-
131 ṇ-aruliṟ=peṟrun=kol-valaikkum-vēṟ-ṟāṇai-ppal-valai-kkōn kunara-

Ninth Plate , first side

132 ppaṭṭu=ppōr-vandavar-madan=tavirkkun=Karavandapurattavar-ku[la-t]tōpṟal māv=ēn-
133 dun = kadaṟ - ṟāṇai - Mūvēndamaṅgalappērarai[ya]ṇ = āgiya Vaidyaka-śikhāmani
    Mūṟangā-
134 ri [||*] I-ppiramadēyam-udaiya Koṟkai-kilān Kāmakkāni Śuvarañ-Jingaṇ i-
135 danul mūṇṟil-onṟun=tanakku vaitt=irandu-kūṟum aimpadinvar Brāhma-
136 naikku nirōd=at{i=kkoduttāṇ [|*] Idapul Mūrtti Eyinan śavai[y*]ōd=o
137 ttadu nāṇg-arai-ppadāgāram-udaiyana [|*] Idapaṭ=ṭanakku vaitta oru-kūṟṟilu-
138 n=tambimāikku nāngun=tañ=chiṟappaṇār-makkalukku āṟum sa-
139 bhai[y*]ōd=otta padāgāran=koduttān [|*] I-ppraśasti pādiṇa Sēnāpa-
140 ti Ēnādi ū[y*]iṇa Śāttañ-Ohūttaṟku mūṉṟu kūṟṟārum-āy=t-
141 tangalōd=otta nāngu padāgāran=koduttār ||⁴

Ninth Plate, second side

142 Āsit⁵=Mangalarājō Madhuratarah śāstravit=kavir=vvāgmī[|*] ājñaptir=asya
    Vaidyah Karavandapur-ā-
143 dhivāstavyah **2** [18*] ⁶Ratshān=narah parakritau vidadhīta vidvān=pādā hi
    Dharmma yaśasah para-
144 masya labdhā[h*] [|*] Dhātr=aiva ⁷srashtam=akhilam ⁸bhuvanan=tath=āpi
    ratshantri⁹ punyaratayah ¹⁰prathivin=narēndrā[h] || [19*] ||⁴
145 Na hi bhūmi-pradānād=vai dānam=anyad=viśishyatē [|*] na ch=āpi bhūmi-haranāt
    pāpa-
146 m=anyad=vidhīyatē **2** [20*] Dātā daś=ānugrahnāti¹¹ yō harēd=daśa hanti
    cha [|*] atīt-ānāgatā-

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¹ Read *kKanga°*
² These two syllables are written over an erasure
⁴ For the ornamental form of the punctuation, see Plate
⁶ On the use of *tsha* for *ksha,* see above, p 1.
⁸ *Read bhuvanaṁ.*
¹⁰ Read *pṛi°*

⁸ Read *°vikalan*
⁵ Read *Āsin=*
⁷ Read *srishṭam-.*
⁹ Read *°nti.*
¹¹ Read *gṛi°,*

(V. 8). He, the patron of the learned, conquered enemy crowds in battles and ascended the scales ; came out of the nectar womb (*of the cow*); and according to rule, gave away heaps of gold[1].

(V 9) His son was the king called Ranadhira, whose prowess was equal to that of the youthful sun and who bore the burden of the earth as sportively as his ancestors wore the neck-lace of (Indra), the chief of the gods.

(V. 10). His son was the glorious king named **Maravarman**, a counterpart of *Purandara* (Indra) ; the dear lord of the beautiful lady, earth, whose pair of feet was surrounded by the collection of gems in the crowns of all kings bowing in obeisance, whose friend was truth , whose wealth was prowess , the lord of the goddess of prosperity (Padmāsanā), who was an ornament of learning and good conduct and a depository of sacred knowledge

(V 11) That lotus-eyed **Rājasimha**, the king of the whole earth, driving away the fear of created beings on earth, ably protected the earth unopposed (*after*) destroying the allied enemies

(V 12). " Is he Nara (*i e*, Arjuna) , is he a giant , is he Hara (*i e*, Śiva) , is he the Primeval Man (Vishnu) , is he Śakra (Indra) come with anger ?" thus thinking of him, in the battle-field, the frightened king **Pallavamalla** runs away (*from him*)

(V 13). Who being made to be born of the womb of the golden (*cow*) and having again ascended the matchless scales, was freed of (*his*) sins and showered freely (*his*) wealth on Brahmans, beggars and temples

(V 14) Thus (*king*) **Māravarman** suitably married the daughter of the **Maḷava** king of high birth , and from her was born, for the good of the world, (*the king*) named **Jaṭila** almost equal to Skanda the son of Śiva

(V 15). That king of great strength ruled the earth clearing it of (*all*) associations of corruption ; the footstool of his lotus feet was worshipped by the great lustre proceeding from the gems on the crowns of prostrating kings

(V 16) I imagine that he lent (*his*) virtues to the Krita (golden age) , (he lent) to the celestial tree its nature, from his hands ; to the subjects who sought refuge (*in him*), his promise of protection ; and to the enemy kings on the battle-field, heaven [2]

(V 17) May he be long glorious on earth, king **Parāntaka**, the son of **Rājasimha**, whose commands are borne on the crowns by rulers of earth

(L. 30) This *praśasti* was composed by **Varōdayabhaṭṭa** who was a performer of all sacrifices (*Sarvakratuyājin*).

(L 31). **Naṟkoṟṟaṉ**, the headman of **Koṟkai**, who never transgressed the path of the *Śrutis* as interpreted by the highly learned (*men*) of the division called **Pāganūr-kūṟṟam**,— a well-watered land of extensive paddy fields, where the beetles buzzed on cool buds in groves blooming with the Nāga and the mango (*trees*),—being desirous of completing a (Vedic) sacrifice begun (*by him*), through (*the favour of*) the ādhirāja of the Pāndyas called **Palyāgamud-ukuḍumi-Peruvaḷudi**, who dispersed the crowd of the enemy kings by leading numbers of ferocious elephants (*against them*), the **kēḻu-Brāhmaṇas**, in presence (*of the king*) saying

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[1] These are the gifts which kings are expected to make on their coronation or on obtaining conspicuous victory in battles They were also expiatory in character. See below, v 18

[2] The nature of the celestial tree is to give whatever is wanted and the hands of the king were giving away gifts on a very liberal scale To give enemy kings heaven means to kill them on the battle field and by so doing to send them to heaven.

"Please hear (O king) " explained the petition (of Narkorran), stood in front of the sacrificial hall and blessed that spot to grow in prosperity under the name Vōlvikudi.[1]

(L 38) The king at once gave it with libations of water and it was since long (so) enjoyed

(L 39) Then a Kali[2] king named Kalabhran took possession of the extensive earth driving away numberless great kings (ādhirāja) and resumed the (village mentioned) above

(L 40) After that, like the sun rising from the expansive ocean, the Pāṇdyādhirāja, named Kadungōn, the lord of the South of sharp javelin who wore (the cloak of) dignity and was the leader of an army, sprang forth, occupied (the throne), spreading round him the brilliant splendour of (his) expanding rays (prowess), destroyed the kings of the extensive earth surrounded by the sea together with (their) strongholds and (their) fame, wielded the sceptre (of justice) and removed by his strength the evil destiny of the goddess of Earth whose splendour deserved to be under the shade of (his) white umbrella, by terminating by his strength[3] the possession of her under others and establishing her in his own possession in the approved manner and destroyed the shining cities of kings who would not submit to him.

(L 46) Then came his son Avanichūlāmani Māravarman, who removed the common ownership of the earth (by making it his own), who was wedded to the goddess (born) of the flower (i e, Lakshmi), the leader of a faultless army of fighting spearsmen, and the infuriated elephant who destroyed by all (possible) means the power (of enemy kings)

(L 48) Then came his son, a lovely one and incomparable, the just ruler, Seḷiyan Vānavan, Sēndan, the lord of the hill-chiefs who throw weapons (dexterously), who removed the spot[4] from the goddess of the earth, who became well known by his prowess and who possessed long hands (holding) the bow, and furious elephants

(L 51) Then to him (was) born, a son,[5] Arikēsari, Asamasaman śrī-Māravarman, whose high jewelled crown was adorned with ornamental hangings , who, like the brilliant Sun from the middle of the eastern mountain, came out spreading his rays, causing the quarters to tremble , won the battle at Pāli by driving into the field of battle caparisoned elephants , conquered the ocean-like army of Vilvēli[6] in the battle of Nelvēli ; destroyed the Pararas who did not seek refuge by approaching him , annihilated the race of the people of Kuru-nāḍu where crowds of beetles abounded on all sides , won a victory at the battle of Sennilam by driving into battle (a herd of) elephants of strong trunks , conquered many a time during the day, in the terrible battle-field of Puliyūr of strongly fortified walls, the Kērala (king) whose matchless sway (extended) over the whole earth together with (his) near relations and their elephants and captured them alive[7], marched against, attacked and destroyed unopposed the sea of weapons, and the high mountains (of that country) , performed many times on earth (the gifts called) hiranya-garbha and tulābhāra, and gave (the same) with pleasure to Brāhmans and the infirm inviting them to come and assemble

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[1] In blessing it, they actually suggested that the king might grant the village to the Brahman Narkorran under the name Vēlvikudi.

[2] Mr K V Lakshmana Rao, M A , has suggested in an article entitled ' The Kopparam Plates of Pulakēśin II, contributed to the Annals of the Bhandarkar Institute, Vol IV, Part I, pp 43 to 54, that Kali-kula occurring therein in text-l 8 is possibly a reference to the Kalabhras He seems to be right , for the phrase Kalabhran=ennun= Kali araisan in l 40 of the Vēlvikudi Plates properly translated means ' a Kali king named Kalabhra '

[3] Tiravidin is interpreted by Pandit R Raghava Aiyengar of Ramnad to mean ' by his strength '

[4] As usual this ' spot ' of the earth is her being in possession of kings other than himself

[5] Dr Winslow gives under vali, the phrase valittonral in the sense of ' a son '

[6] Dr Krishnaswami Aiyyangar holds the view that Vil-vēli means ' a hedge of bows,' but here it must refer to a name

[7] The word -iravamai is explained by Pandit Raghava Aiyengar of Ramnad to mean ' in a moment '

(L 62) Then (came) his son King Śadaiyaṇ, the lord of Kongas, whose javelins were long, brilliant and destructive, who was (also called) Tennan Vāṇavan, Śembiyaṇ, Śōḷaṇ,[1] king of kings, the beautiful Karunātakan, who with the victorious javelin in his right (hand), fought and destroyed the glory of the ocean-like army that came forth at Marudūr and capturing Āyavēl, attacked and destroyed him completely[2], gained victories in battles at Śengodi and Pudāṇkōdu[3] and brought his (i e, Āyavēl's) anger to an end , at the great city called Mangalapura, where the peacock danced with the cuckoo near tanks perfumed with opening flowers, attacked and destroyed the Mahārathas ; removed the word " common property "[4] (with reference to) the country (bordering) on the roaring sea , administered justice tempered with mercy and ruled the earth with love, having reached the slopes of the high and permanent mountain (Mēru) and cut on the broad face of it the bow, the tiger and the fish

(L 71) Then (came) his son Tēr-Māraṇ (i.e, Māraṇ of the horse-chariot) the king of kings, a member of the Pāṇḍya (Tennavar) family, the proud possessor of the white parasol, who in order to acquire the goddess of the earth, carried in his right hand the awe-inspiring javelin and driving (forth) mast elephants (into the battlefield), defeated straightway at Neḍuvayal his opponents, who had rushed in great haste (against him) , suppressed the rage of those whose minds were filled with anger (against him), at Kuṟumaḍai, destroyed the power of (the enemies) who confronted him at Minnikuṟichchi and Tirumangai ; saw the backs of the insubordinate (chiefs) who advanced towards him with an ocean-like army, at Pūvalūr; captured the fiery steeds, the black elephants and the sharp missiles of enemies at Kodumbālūr which had high ramparts and deep trenches (round it) , deprived the splendour of the Pallava (king)
. .   . at Kulumbūr and took numberless huge elephants and horses , humbled at Periyalūr the greatness of those who had come to cut him asunder not bearing (to see his greatness) , crossed the Kāviri (with its) groves (of trees) and tanks of budding flowers ; subjugated Maḷa-Kongam with (the help of his) beautiful long bow ; proceeded and reached Pāṇḍikkodumidi of high fortifications, beautiful with the lustre emanating from brilliant gems , prostrated at and worshipped the lotus feet of Paśupati (Śiva) , gave away with great pleasure heaps of gold and lustrous gems, contracted relationship with Gangarāja, who wore garlands of sweet-scented flowers , and performing on earth countless (gifts of) Gōsahasra, hiranyagarbha and tulābhāra, relieved the distress of (the Brāhmaṇas) who studied the Vēdas, renewed the palaces and the high ramparts (of the capital towns)[5] named Kūḍal (i e, Madura), Vañji (Karūr) and Kōḷi (Uṟaiyūr) and ruled the whole earth (bounded) by the roaring ocean

(L 88) Then (came) his son Neḍuñjaḍaiyan, the king of the Nēriyar (i e, the Chōlas), who (wore) a high crown covered with flowers and gems, who kept (his) council secret, who was respected for his virtues (and possessed) an army of battalions (as extensive) as the rising noisy ocean, who was afraid of (committing) sins, who had no wants, who was the lover of the learned (Panditavatsala), death to his enemies (Parāntaka), a Pārtha (i e, Arjuna) in (wielding) the bow, clever in his designs, cruel to the wicked, the enemy of the Kali (age) (Kalippagai), the performer of noble deeds, the abode of mercy, a Kinnara in music, firm as mountain, the smasher of heroes, he who equalled Manu, whose commands were obeyed, who was strong as

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[1] The king having conquered the Chēra and the Chōla, apparently appropriated their crests also, viz , the bow and the tiger and their titles Vānavan, Śembiyan and Śōlan

[2] The word ēyennāmai is translated tentatively.

[3] Śen-godi and pudān-koṭṭu may have to be interpreted in the sense of ' brilliant flag' and ' brand new drum ' (?), which perhaps were the boast of the Āyavēl

[4] I e made it all his own

[5] We must understand after eṇṇum, some word like nagarangaḷin   But it is also possible that māda māmadil is a recognised term (rūḍha-nāma) for a capital town with palaces and fortifications, cf the term as it occurs in l,

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wind, the foremost of the valiant, master of heroism, renowned for good behaviour, free from (all) blemish, Punappuliyan, Sinachcholan, Srivara, the paramour of Śrī (i.e., Lakshmī), the Tennan (i.e., Pāndya) and Vānaven (i.e., Chēra) ¹ who long hard battle the bow and whose one word (of command) was accepted by the earth (bounded by) the noisy sea, who appeared in the form of Vishnu with victory thrice fold² prove long the earth under his cool white umbrella, well praised by the goddess of the flower (i.e. Lakshmī), the goddess of the earth and the goddess of the tongue (i.e., Sarasvatī), who began his rule so brilliantly that the strength of the lord of Kali was weakened; who in the battle of Pennāgadam (surrounded by) an expanse of water and flowery groves and (situated) on the southern bank of the Kāvēri of blooming flowers and well-watered paddy fields, defeated the Kēdara (king), who inconsiderately came and attacked (him) with his four-fold big army spread on all sides of the extensive earth girt by the black ocean, and drove (him) into the forest; and who crushing and driving in a fierce battle the Āya-Vēl and the Kurumbas that came and attacked (him) in great numbers, advanced with fiery spears and gained a victory over them in a battle at Nāttukkurumbu (i.e., Kurumbu-nādu) (so that they) sought shelter in forests for (their) fortifications

(L. 103) While the third year of the reign of this (king) was current, one (particular) day a bystander of Kūdal (i.e., Madura) (the city of) mansions and high ramparts, having cried out (by way of complaint)², the king himself at once called him mildly and was pleased to ask him first "what is your complaint" The bystander submitted thus "Oh! Mighty king of powerful army! Formerly without swerving from the pure (path) prescribed by law, (the village) called Vēlvikudi included in Pāganūr-kūrram, whose flowery groves touched the sky was designated Vēlvikudi and was granted through the Iḍu (Brahmans) by your ancestor, the great lord known as Palyāgamudukudumi-Peruvaludi, who protected (the earth) girt by the ocean with an army of spearsmen who never miss (their aim). It has (since) been resumed by the ignoble (yet) ocean-like army of the Kalabhras" The king gently smiled and said, "Very well, very well, prove your antiquity (of the gift) by (a reference to) the district (assembly) and receive (it back)" He (the supplicant) proved then and there, the antiquity of his (claim) by (a reference to) the district (assembly) Thereupon the powerful king, of long arms holding the bow, being overjoyed was pleased to declare "what was granted formerly by my ancestor according to rule, is also granted by Us," and so saying he, of (many) chariots and ocean-like army, gave (it) with libations of water to Kāmakkāni Narchingan, the headman of Korkai

(L. 118). The four big boundaries of this (village) given in full detail are —(The eastern boundry is) to the west of the boundary of Nagarūr surrounded on (all) sides by faultless flower-gardens The southern boundary of this (is) to the north of the field (called) Kūlvandai-śēy of Kulandēvan and of the banyan tree in the Kalandai pond The western boundary of this (is) to the east of the mound (peruppu) on the western side of the field (called) Odumaiyiruppai-śēy of the faultless Korrapputtūr And the northern boundary of this (is) to the south of the mound on the northern side of (the village of) Pāyal where lotuses grow in canals

(L. 124). The land included within the four big boundaries thus described is also given away by us, inclusive of kārānmai and miyātchi, in the same manner as it had been given formerly by our ancestors

(L. 126) The ānatti of this (grant) correctly described is Madavikalan, Mārangāri, the crest-jewel of the Vaidyaka family entitled Mūvēndamangalappēraraiyan who was favoured by the king of kings, whose army fought powerfully like a thunderbolt, in battles where

machines shaped like wild hogs (*ēnappori*) killed (*the enemies*) in (*close*) fight with (*drawn*) swords when the kings of the east (Pūrvarājar) possessing clámorous battalions of fighting men rose up, and put to flight with (*great*) loss in an infantry attack at Venbai, the Vallabha of a vast army of archers, on the occasion when the excellent daughter of Gangarāja who wore a garland of highly scented flowers (*dribbling*) honey was secured and offered to Kongarkōn (i.e., the Pāṇḍya king)[1], who was a prince of the race of Karavandapurattavar, who possessed a powerful and big army that crushed the pride of those who came to fight being (*thither*) brought together by (i e., under the leadership of) kings wearing many bracelets and possessing an army of spearsmen who wielded deadly weapons

(L 134). Kāmakkāni Suvaraṇ Singan, the headman of Koṟkai, who owns this *brahmadēya* reserving for himself one-third of this (*village*), gave the (*remaining*) two parts to fifty Brāhmaṇas with libations of water. In this are included the four and a half *paḍāgāras* (*of land*) of Mūrti Eyin in approved by the (*village*) assembly. And in the part reserved for himself in this (*village*) he gave with the approval of the (*village*) assembly four *paḍāgāras* to his younger brothers and six *paḍāgāras* to his younger paternal uncle's children And the owners of the three parts with their united approval gave four *paḍāgāras* (*of land*) to the general (Senāpati) Ēnādi *alias* Sāttan Sāttaṇ, who composed[2] this eulogy (*praśasti*)

(V 18) The *ājñapti* of this (document) was Mangalarāja, the very sweet (*madhuratara*) poet (*kavi*) and orator, well versed in the sciences, a Vaidya and a resident of Karavandapura.

(V 19) Oh ! Dharma ! A (*learned*) man must render protection to the deeds of others. Indeed (*these are*) the feet acquired by (i e , on which stands) great fame The world was all created by Dhātri (Brahman) Still kings desirous of merit protect the earth.

(V 20) No gift is greater than the gift of land, nor is there a greater sin enjoined (*on man*) than (*that of*) resuming land (*already given*)

(V. 21). Oh ! Gladdener of your race ! He that makes a gift on this earth blesses (*his*) ten generations past and future ; and he that takes away (*that which has been given*) destroys ten generations past and future

(V 22) To him that robs land given by himself or by others, there is no expiation-anywhere except in the dreadful hell

(V. 23) Lands have been given away by many. Different kings are ruling (*them*). The fruit (*of protection*) belongs to him whose land it happens to be (*at the time*). These four are verses in the Vaishnava-Dharma

(L. 151) " The flower-like feet of those who protect this (*charity*) shall be on my crown " The king himself was thus pleased to say and caused a copper-plate grant to be executed at once.

(L 152.) Suttakēśari-pPerumbānaikkāraṇ who engraved this (*document*), and to whom were allotted through the favour of the great men (*of the village*) one house-site, two *mā* of (*wet*) field and one[3] dry field received (*the above*). This is the signature of Yuddhakēśari-Perumbānaikka[ra]ṇ.

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[1] See above, p 307. If we took Kongarkōṇ as referring to the king of the Kongas, the reason for Māraṅgāri taking part with the Konga king will have to be explained. So far as we know, the Konga king was an enemy of the Pānḍya and was on several occasions defeated by him

[2] The word *pāḍinᵃ* clearly indicates that the composition was in verse.

[3] Perhaps one *ma*.

the reading in the other document also, the sense being that as this king furnishes a living example people have to believe in the historical reality of the rulers like Prithu, Sagara, etc The remaining two words, as is shown by this plate where they occur in line 35 and line 42, respectively, were correctly read by him

The charter was issued by the devout worshipper of Sugata or Buddha, the *Paramēśvara-Paramabhattāraka* and *Mahārājādhirāja*, the illustrious Dēvapāladēva, the son and successor of Dharmapāla, who is regarded to have been the most powerful of the Pāla kings of Bengal As I have just stated, its introductory portion is identical with that of the other grant and gives the genealogy of the donor which has already been discussed by scholars The formal part of the grant, which the inscription registers, is worth considering The wording is the same as we find in the other document The officials mentioned are also similar, including the " *Pramātri* " and the " *Sarabhanga* ", excepting the " *Prāntapāla* " who is left out, though the order in which they are named is different Amongst the names of the countries mentioned in line 35 of the Mungir (Monghyr) plate, this inscription puts *Ōḍra* in place of *Gauḍa* and omits *Lāṭa* altogether. Herein we are told that Dēvapāladēva at the request of the illustrious Bālaputradēva the ruler of Suvarnnadvipa, made through an ambassador, granted five villages, four of which lay in the Rajagrīha (Rājgir) and one in the Gayā *vishaya* (district) of the Srī-Nagarabhukti (Patna Division) for the increase of merit and fame of his parents and himself for the sake of income toward the blessed Lord Buddha, for various comforts of the revered *bhikshus* of the four quarters and for writing the *dharma-ratnas* or Buddhist texts (i e for the three jewels) and for the upkeep of the monastery built at *Nālandā* at the instance of the said king of *Suvarnnadvipa* The endowment, being entirely Buddhist, forms a distinctive feature of the grant and amply justifies the epithet of *parama-Saugata* applied to the donor The four villages granted in the Rājagrīha *vishaya* were Nandivanāka, Manīvātaka, Natikā and Hastigrāma and the one in the Gayā *vishaya* was called Pālāmaka As is usually the case in such grants, this part of the document ends with the date of the endowment which is the 21st day of Kārtika of the (regnal) year 39 and is written after the orders of the royal donor demanding regular payment of all the revenues due for the purposes noted above

The second side of the plate first gives the well-known imprecatory and benedictory verses and, thereafter, introduces Balavarmman who acted as the dūtaka in this ' meritorious undertaking' and whom it describes as the 'overlord of Vyāghratatī-mandala, ever ready to fight his foes independently' Evidently he was the official of the King of Magadha entrusted with all arrangements to be made in connection with the grant Then the inscription supplies, though unfortunately too meagre, an account of Bālaputradēva, the king of Suvarnnadvipa at whose instance the endowment was made giving, also, some information regarding his ancestry. It is mainly in this connection that this document is specially interesting and possesses considerable international value. We learn that the dynasty to which Bālaputra belonged was that of the Śailēndras, who were Buddhists and held the island of Java under their sway about the eighth century of the Christian era or the Śaka year 700 The latter fact about the Śailēndras is already known from the Kalāsan inscription which has been published by Dr. (now Sir) R. G Bhandarkar[1] and Dr J L A Brandes[2] But this Nālandā copper-plate introduces to history for the first time srī-Bālaputradēva, 'the Śailēndra King of Suvarnnadvipa together with some of his relations, as well as the *dūtaka* (of the grant), namely, Balavarmman

The illustrious Mahārāja Bālaputradēva, our inscription tells us, was the overlord of Suvarnnadvipa His mother was Tārā, the daughter of a King Dharmasētu of the lunar race and

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[1] *Journal* of the *Bombay Branch* of the *Royal Asiatic Society*, Vol XVII, Part II, for 1887, Art I.
[2] The *Tydscrift voor de Taal-,Landen-Volkenkunde van Nederlandsch Indië*, XXXI (1886), p 240 sq.

the queen consort of the mighty king who was the son of the renowned ruler of "Yavabhūmi." The latter, we are told, was the ornament of the Śailēndra dynasty and 'his name was conformable to the illustrious crusher or tormentor of his brave enemies'. Though the epigraph gives high praises for all these rulers, yet it contains no other information regarding their identity. The name of the father of Bālaputradēva is not given at all but the name of the grandfather is said to have been something like 'Śrī-vīra-vairi-mathena', meaning 'the illustrious destroyer of heroic foes.' This would lead us to surmise that the name must have been one like Pararivarddhi-dēva, Śatrañjaya, Arimarddana, Arindama, etc., but what it really was I am not in a position to find out. The Yavabhūmi and the Suvarnnadvīpa are evidently identical with the Yavadvīpa and the Suvarnnadvīpa islands spoken of in Sanskrit works like the *Rāmāyaṇa*[1] or the *Kathāsāritsāgara*[2] and are unquestionably the modern Java and Sumatra. While speaking of Bālaputradēva as the king of Suvarnnadvīpa and his grandfather as the ruler of Yavabhūmi, the author of our inscription, apparently, took both the islands as one considering them practically united. As M. Duroiselle kindly tells me, the consensus of opinion, arrived at by scholars like Barth and Kern, is that Suvarnnadvīpa and Yavadvīpa are the same, that is Java-Sumatra. The document goes to confirm the view that Yavadvīpa is Java proper and that Suvarnnadvīpa is properly Sumatra. This Suvarnnadvīpa, however, is different from the Suvarnnabhūmi, which, as M. Duroiselle has kindly informed me, in its most extended sense refers to Indo-China, but, particularly, to the country extending beyond the eastern and northern coasts of the Bay of Bengal or Rāmaññadēśa (i.e., lower Burma.)

Now the question which would present itself for solution is, who were the Śailēndras mentioned in the plate? There are only two Javanese inscriptions in Nāgarī, known to me, which were issued by a king of the Śailēndra dynasty. One of them, to which I have alluded above, commemorates the foundation of a temple of Tārā, the well-known Goddess of the Mahāyāna pantheon, the setting up of her image, and the building of a monastery in the year 700 of the Śaka era during the prosperous reign of a king of this dynasty[3] whose name to our regret is not forthcoming. The other[4] inscription is not yet published and the following information regarding it I owe to the courtesy of Dr. Bosch, Director of Archaeology in Netherlands-India. It comes from Klurak, a site between the Prambanam and Sewn-temples in Central Java and belongs to the Śaka year 704, the object being to commemorate the erection of an image of Mañjuśrī, another noted divinity of the Mahāyāna pantheon. In one of the lines of this inscription Dr. Bosch reads *rājñā dhṛtā dhṛtīmatā dharanīndranāmnā* and finds the king's name to be Indra, though one could take it to be Dharaṇīndra (earthly Indra) as well. Yet another inscription I know of, which is connected with this evasive race of the Śailēndras, comes not from Java but from India and, like our Nālandā inscription, records the erection of a monastery and an endowment for it. It is engraved on twenty-one copper-plates now preserved in the Leyden Museum in Holland and belongs to the reign of the Chōla King Rājarāja-Rājakēsari-varmman (985-1013 A.D.) This highly interesting document tells us that the illustrious king Māravijayōttungavarmman of the Śailēndra dynasty and the lord of Śrīvijaya[5] caused to

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[1] Canto IV, Chap. XL, St. 30, and the *Tilaka* commentary on these verses. Here we find that Java in remote antiquity formed a large principality which comprised not less than seven minor states.

[2] Tharaṅga, 57, Sts. 96, 134, 173, etc.

[3] रावे प्रवर्दमाने राज मौले-द्रवश तिलकस्य. Dr. Bhandarkar read in the sixth line of this inscription *Śailēndra-varmmatanujasya* and though he took it to be *Śailēndravarmman* was the proper name of the father of the donor whose name he took to be Panāmkaraṇa. The correct reading, however, as the late Dr. J. L. A. Brandes has shown, must be *Śailēndravamśatilakasya*.

[4] Except these two inscriptions there exists a number of fragments of inscribed slabs, which according to Dr. Bosch, might be attributed to the Śailēndra race but they are all too weather-worn to be deciphered.

[5] Dr. Hultzsch takes Śrī-Vijaya of Tamil inscriptions as the equivalent of Śrī-vishaya (above, Vol. IX, p. 231).

be built a lofty and very beautiful monastery at Nāgapattana, the present port of Negapatam[1] and that it was endowed by the Chōla king Rājarāja, thus furnishing an exact parallel to the Nālandā monastery of our plate[2] This Śrīvijaya is the same as the San-fo-tsai of the Chinese Annals and, according to M. George Coedes, must be identified with the kingdom of Śrīvijaya or Palembang, which is a residency of Sumatra[3] The Leyden grant says that Māmvijayōttuṅgavarmman was the overlord (adhipati) of Śrīvijaya who, while extending the kingdom of Katāha, caused that monastery to be built in the name of his father. Thus on the authority of this invaluable record it becomes clear that, about the end of the 10th century A. D., Sumatra was governed by the Śailēndra dynasty to which king Māravijayōttuṅga-varmman or his father Chūḍāmanivarmman belonged That both Sumatra and Java were under the sway of the Śailēndras about the ninth century we glean from the Nālandā copper-plate inscription That they were governed by the same dynasty in the seventh century of the Christian era we learn from the two inscriptions to which I have referred above. In one of the inscriptions[4] engraved on the south wall of the well-known temple at Tanjore we find that Rājēndra-Chōla caught a king of Kaḍāram, named Saṅgrāmavijayōttungavarmman, and took his vehicles as well as accumulated treasure. This king of Kaḍāram in the light of the Leyden grant was, probably, the successor of Māravijayōttuṅgavarmman, the Śailēndra king of Śrīvijaya spoken of in it. If the Tanjore inscription is to be trusted—I do not think there is any reason why it should not be—we can say that Rājēndra-Chōla, while capturing the king, succeeded in conquering the kingdom of Śrīvijaya or Palembang The Leyden plates tell us that he confirmed the grant made by his father Rājarāja for the monastery built by the Śailēndra king Māravijayōttuṅgavarmman or the predecessor of the very ruler whom he caught and dispossessed of heaps of treasures. This would lead us to surmise that Saṅgrāmavijayōttungavarmman proved refractory and the Chōla King had to take the extreme step to bring him round. Here it may be remarked that in the documents, known at present, these Śailēndras or the rulers of Śrīvijaya are no where mentioned as the feudatories of the Chōlas or other Indian kings. Building convents or vihāras in one's territory does not necessarily indicate tutelage[5] though it does show friendship or mutual regard. That the Śailēndras founded monasteries in India at Nālandā or elsewhere certainly signifies their being fervent Buddhists. These vihāras, like the one founded at Bodh Gayā by Mēghavarm of Ceylon during the Gupta epoch, gave shelter to their own people as well as others Dēvapāladēva was a staunch Buddhist. He endowed the monastery, which Bālaputradēva, the Javanese King, founded at Nālandā, at the latter's express request, communicated to him through a dūtaka or ambassador. But this fact alone cannot imply that the ruler of Java was a vassal of the King of Magadha. Though the capture of the King of Kaḍāram by Rājēndra-Chōla in later days indicates submission no doubt, yet I think, to show that the Śailēndras were really the feudatories of the Chōlas, proof is still wanting. Under the existing circumstances what we can safely assume is that the relations of these Kings were rather based on trade and traffic and were of a peaceful nature.

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[1] It was probably this structure, which, as the late Mr. Smith has said in his Early History of India, 3rd ed., p. 466, survived in a ruinous condition until 1867, when the remains of it were pulled down by the Jesuit fathers and utilised for the construction of Christian buildings.

[2] The splendid convent built by King Mēghavarṃ of Ceylon at Bodh-Gayā near the holy Bōdhidruma about the year A. D. 360 with the permission of Samudragupta, the Great, affords another instance of this kind. For a brief account of it see Smith's Ancient History of India, 3rd ed., p 287.

[3] Encyclopædia Britannica, XI ed., Vol. XXVI, p. 73. For mention of Śrīvijaya in an old Malaya inscription probably of the 7th Century A. D., lately found in Palembang, see Ph S. Van Ronkeb's notice in the Acta Orientalia, Vol II, Part I, p 21

[4] South-Indian Inscriptions, Vol II, pp. 105 ff.

[5] The late Mr. Venkayya (A. S. R., 1911-12, p. 175), apparently, assumed that the Śailēndras were feudatory to the Chōla Kings,

connection with the Chēdi family[1] It is also noteworthy that sometimes their names end in *varmman* From the records noticed above we find that the names of the Sailēndras of Java-Sumatra or Srivijaya ended in *varmman*[3] The name of the Sailōndra ruler given in the Nālandī plate on the other hand ends in *dēva* This looks rather strange The name Bāla-putra itself, signifying ' young son ' is curious. This ending of *dēva*, however, occurs only in the prose and formal portion but not in the other or metrical portion, which describes and eulogises these Sailēndras This would go to suggest that the suffix was left out because the metre did not require it, or possibly because it did not form an integral part of the name and would have been replaced by *varmman*, a general suffix or surname of the ruling caste or the Kshatriyas The name, however, is pure Sanskrit as is the name of Tārā the mother of Bālaputradēva, or Dharmasētu, her father, and would point to emigration from India Had the names of the two ancestors of Bālaputradēva, that is to say, his father and grandfather, been given we could be definite in the matter, for, if these names were un-Indian, as in the case of Kundinga, his son Asvavarman and grandson Mūlavarman of Borneo, we could conclude that the Sanskrit names must have been taken after conversion to Hinduism, or rather Buddhism But in none of the names of the Sailēndras do we find any foreign sound at all, suggesting that they were the natives of the islands originally and came into the fold of Buddhism afterwards

The names of the Pāla kings and other personages mentioned in the introductory portion of this grant have been dealt with by Kielhorn or other scholars in connection with the contents of the Munger copper-plate inscription So I need not notice them here But, besides them and the Sailēndras, our record speaks of two more persons and they require special mention One of them is Dharmasētu whom the inscription describes as a scion of the Lunar race and the father of Bālaputradēva's mother, namely, Tārā To our regret it does not supply any other particular regarding him and it is hardly possible to identify him or to say

[1] Mr. K. V Sabrahmanya Ayyar, to whom I am indebted for this information, has kindly given me the following note on the Malaiyamāns —

"Ancient Tamil works mention the names of a number of Malaiyamān chiefs, who might be attributed to the 7th and 8th centuries A. D Some of these are —(1) *Malaiyamān Tirumudikkāri*, (2) *Malaiyamān Sōliya-Ēnādi Tirukkannap*, (3) *Malādar-Kōmān Meypporul-Nāyanār* and *Narasinga-Munaiyaraiyar of Tirumunaippādi* Their capital was Tirukoilur, the head quarters of a *taluk* in the South Arcot district and a railway-station in the Kātpādi-Villupuram section of the South Indian Railway It is said to have been situated within the Chēdi country.

The Malaiyamān chiefs appear to have been rendering help to one or the other of the principal powers of the South, *viz*, the Chēra, Chōla, Pāndya and the Pallava. Narasingamunaiyaraiyar was a contemporary of the Saiva saint Sundara-Mūrti-Nayanār of the 8th century A D he is counted as one of the canonised 63 Saiva devotees of the Tamil country In the account given of No 3, in the Tamil hagiology, *Periyapurāṇam* figures a Tattan, whose name may be regarded as a variant of Datta Besides, one of the poems of the Tamil anthology, *Pattuppāttu* was composed in honour of a certain " Ārya king Piragadattan (Bhriga-Datta)" It may be noted that the Malaiyamān chiefs belonged to the Bhrigu race as is evidenced by their inscriptions Epigraphical reference to Narasinhamunaiyaraiyar is found in the Tanjore inscriptions of the Chola King Rājarāja I (A D. 985 1013) In an early stone record of Rājukēsarivarman found at Tiruvādīsvaram near Kumbakonam, of about the 9th century A D mention is made of Milāduduyar-palli

It is interesting to note that the later members of the Malaiyamān family, who figure in numerous stone inscriptions, call themselves invariably Chēdiyarāyas (Chedirajas) and they are mostly subordinates of the Chōlas of the 10th to the 13th centuries A D The appellation *Chēdiyarāyan*, assumed by almost all the chiefs, if it is not a mere accident, as it could not be, must indicate that they were the rulers of the Chēdi country This fact taken with the names like Datta would make one infer a colonisation at some remote past of a branch of the line of Chēdi Kings, in the South Arcot district, where we find them."

[2] E Hultzsch, *Ep. Ind*, Vol VII, pp 186 and 146

[3] Dr. Vogel in the aforesaid publication (page 194) remarks —" Considering that among the dynasties of India proper there is a great variety of such royal surnames, as *āditya, gupta, chandra, dēvapala, rāta, vardhana simha*, and *sēna*, the almost universal employment of names in *varmman* in the Far East is certainly very remarkable" The instance of our Bālaputradēva will furnish an exception

2 x

whether he was an Indian king or some ruler in the Far East   The name whether it is read as Dharma or Varma-sētu appears to be new   The other interesting name occurring in the document is that of Balavarmman the ruler of Vyāghratati-mandala, who acted as *dūtaka* on behalf of the Magadhan king. As to why he was selected or what special connection he had with the ruler of such a remote island as Sumatra or Java, and whether he had been there or known personally to that king our inscription makes no mention   Apparently, there was no direct political relationship between the two, for, we know from the Khalimpur[1] plate of Dharmapāladēva that the Vyāghratatīmandala lay within the *bhukti* of Pundravardhana, which was under the sway of the Pāla king Dharmapāla and, evidently, of Dēvapāladēva after him. Pundravardhana is the same as Paundravardhana—Pundra and Paundra being synonymous—which is the modern Rājshāhi district of Bengal[2]. The use of the word *adhipati* would indicate that in this instance at least the term *mandala* connotes a larger area than *vishaya*, which in the majority of cases seems to include a *mandala*[3]. During the reign of Dēvapāladēva, Vyāghratatī was governed by a distinct ruler called Balavarmman. The way in which he is praised in this epigraph, as the right arm of the Emperor, would show that he had a high rank even though he was one of the feudatories of Dēvapāladēva As, however, our plate gives no genealogy or particulars about him his personality is very vague. A few homonymous[4] rulers are known to have flourished about that time but they appear to be quite different personages and even their dates will not agree with that of this plate It looks curious that though the charter mentions the *dūtaka* of the King of Magadha yet it leaves the ambassador or ambassadors of the Javanese King unnamed altogether.

The vague manner in which the inscription describes the rulers of the Far East or Sumatra-Java and their relative king of the lunar race would show that its author did not know much of them He knew of Bālaputradēva and his mother Tārā. The latter he compared to the goddess of that name It is not improbable that the grant registered in the epigraph was made chiefly at her instance

Our plate mentions several places calling for remarks Out of these, I have already noticed three, namely, *Suvarnnadrīpa*, *Yavabhūmi*, and *Vyāghratatī* Of the remaining ones Nālandā is the most important. The way, in which this record speaks of it, would show that it continued to be as important a centre of Buddhist lore as it was during the time of Hiuen Tsang's visit The spelling of the name given in this document is Nālandā which is the correct way of writing it The same spelling is given in a votive inscription on the image of

[1] *Ep. Ind.*, Vol. IV, pp. 243 ff *J B B A. S*, LXIII (1894), pp. 39 ff.

[2] Smith *Early History of India*, p. 373. As has already been stated by Cunningham (*A S R*, Vol. XV, pp. 112 ff.) Kāntāra is another name of Pundra or Paundra, *i.e.*, sugarcane, and the Mahākāntāra of the Allahabad Inscription of Samudragupta, the Great, was probably an older name of this province which, about the middle of the fourth century of the Christian era, was governed by a King Vyāghra. Thus it does not appear to be improbable that the district of *Vyāghratati* or the tiger's precipice—unless of course *vyāghra* is taken in the sense of castor oil in which case the word *Vyaghratati* would be the slope marked or overgrown with castor plants,—was named after this tiger king.

[3] This would rather show that no mistake was made in the text of the Khalimpur grant and that Kielhorn's statement in the *Ep. Ind.*, Vol. IV, p 258, footnote 3 that it was, will be obviated

[4] For instance we know of a Balavarman, the lord of Prāgjyōtisha (Gauhati or Assam) from the Nowgong copper-plate (Dr A F. Hoernle, *J. B. A.S* LXVI, pp 285 ff.) and another of Kārusha or rather Brihadgriha (Kielhorn, *Ind. Ant* Vol. XX, pp 123 ff). On palaeographic grounds the former of the two has been assigned to the last quarter of the 10th century or say nearly one century later than the date of Dēvapāladēva. The other is too little known to admit of identification. The third ruler of the name, who will synchronise with our document, was the father of Avantivarman II, who was the feudatory of Mahēndrapāla of Kannuj (cir. 890 A. D.), To think of identifying him with the Balavarmman of the Nālandā plate will be altogether unreasonable, for he was the ruler of Kāthiawar, or Saurāshtra and a feudatory of the formidable rival of the monarch of Bengal.

Sankarshana which was dug out of the same site[1] and the newly discovered statue of Tārā. It again occurs not only in some Jaina writings but such an old work as the *Dīghanikāya*[2]. However, it seems to be noteworthy that none of these works called Nālandā a university but only a prosperous town though Hiuen Tsang describes it as if it were a University The way in which it is described in our plate would show that it was really a centre of Buddhist learning

As to the remaining place-names mentioned in this document, I think, Śrīnagara or Śrīnagara-bhukti must be identified with modern Patna, which as a district, includes Rājagriha (Rājgir) and, as a division or commissionership, comprises the district of Gayā, even now. It is true that in the Khalimpur grant of Dharmapāladēva, which has been referred to above, the name given for the city is Pātaliputra and not Śrīnagara or Nagara, still, I think, there were two designations, the one, *viz*, Pātaliputra, which meant the whole town and the other, *viz.*, Śrīnagara, the main part of it, like the Bankipore of to-day. Nagara means the chief town generally, but in this case it meant *the* town, the prefix *Śrī* implying prosperity or wealth of the town. In other words Pātaliputra was the *pattana*[3] and the seat of Government, especially in earlier days during the supremacy of the Mauryas or the Imperial Guptas,[4] lay there, and Śrīnagara was its principal portion where the office of the *bhukti* or division was situated   One was concerned with the whole government but the other only with eight hundred[5] villages coming in its jurisdiction or *bhukti*. Thus Śrīnagara must have been a part of the whole which was termed Pātaliputra[6] That, apparently, is the reason why the latter and not the former appellation of the town is to be met with in literature.

That Rājagriha and Gayā are respectively the Rājgir and Gayā of to-day requires no demonstration   The latter is a district still, though the former has now dwindled into a ruined town of the Bihār subdivision of Patna.

Regarding the villages which formed the object of the grant or endowment registered in the charter, we are told that Nandivanāka and Maṇivātaka were situated in the Ajapura-*naya* subdivision, Naṭikā in the Pilipinkā, and Hastigrāma in the Achalā-*naya* or subdivision of the Rājagriha *vishaya* or district, and that Pālāmaka was situated in the Kumudasūtra *vīthī*, a subdivision of the Gayā district. If similarity of sound can be depended on, I would propose the following identifications to which proximity of Nālandā will lend a great support   The Ajapura 'naya' or subdivision of the inscription may possibly be represented by the Ajaipur[7] village in the Ajai Hisse Chahāram Mauzā in the Bihār Thānā and the two villages Nandivanāka and Maṇivātaka, granted in it, would be the Nadiune or Naunvan and Manianwan villages of these days, which are included in the Bihār Thānā. Pilipinkā I am inclined to identify with the Pilkhi or Pilkee Mauza and the Naṭikā village with the Nai Pokhar of to-day, both lying in the Silāo Thānā. Though I am unable to offer any identification for the ancient Achalā yet, I fancy, the village Hasti or Hastigrāma of the grant might be the Bethoa Bighā village of the Bihār Thānā if not the Hathi Tolā of the Maner Police subdivision   The old village directory[8] of the Gayā district available to me does not, apparently, give any name

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[1] See my *Annual Report of the Central Circle*, (Patna), for 1921, p. 5 and *J B B. O. R S*, Vol X, pp 80 ff

[2] Vol I pp. 1 & 211-12

[3] Cf. 'प्रधानभूतं नगरम्', Bharata quoted in the *Śabdakalpadruma* under Nagara.

[4] Cf पत्तनं यत्र राजधानी स्थिता and नगरमध्यस्थतग्रामस्य तद्ब्यवहारस्थानम्, Yaśōdhara in his *Jayamaṅgalā* on the *Kāmasūtra* of Vātsyāyana (N S. Edition), p 44

[5] Even in the Khalimpur grant the *śrīmajjayaskandhāvāra*, or 'royal camp or headquarters' lay at Pātaliputra. For the meaning of this expression cf. V. Smith ; *Early History of India*, p 398 and footnote 3.

[6] Similarly, I would identify the *nagara-bhukti* of the legend on the seal, which, Dr Spooner discovered during his explorations of the site (see his *A P R. (E C)* for 1916-17, p. 48) with the *Śrīnagara-bhukti* of this document

[7] *Village Directory of the Presidency of Bengal*, Vol XXVI (Patna District).

[8] *Village Directory of the Presidency of Bengal*, Vol. XXVII (Gaya District).

2 x 2

resembling the Kumudasūtra (or sūnu) or the Pālāmaka of our record and I refrain from offering a conjecture regarding their identity

In connection with these place-names, it is interesting to note, that our document supplies one or two territorial terms, which appear to be new. The term *mandala*, as I have remarked above, is here used, as in the grant of Amma II,[1] in the sense of *dēśa*, of which *vishaya* was a subdivision. The word '*vīthī*', which generally signifies a market, road-way or the like, appears to have been used, in this charter, in the sense of a division smaller than *vishaya*. Similarly the term '*naya*' seems to imply a like division. The use of these terms would show that *bhukti* was divided into *mandalas* which were subdivided into *vishayas*, the latter being again portioned into *vīthīs* or *nayas*[2] It is noteworthy that our document employs the term *naya* in the case of Rājagriha *vishaya* and *vīthī* in the case of Gayā *vishaya*. The former occurs regularly after (1) Ajapura, (2) Pilipinkā and (3) Achalā, which lay in the district or *vishaya* of Rājagriha, while the latter term is to be found in connection with the district or *vishaya* of Gayā only. This would indicate that in the two *vishayas*, which were so contiguous to each other, there were, probably, different subdivisions made, apparently, for revenue purposes, Rājagriha being subdivided into *nayas* and Gayā into *vīthīs*. Thus, we can say that the villages Nandivanāka and Manivātaka lay in the subdivision or *naya* of Ajapura, Natikā in the *naya* of Achalā, all these falling within the Rājagriha *vishaya*. The village of Pālāmaka, on the other hand, which belonged to the district or *vishaya* of Gayā, lay in the subdivision of Kumudasūtra, i.e., Kumudasūtra-*vīthī*[3]

TEXT.

Obverse

Metres used · *Śārdūlavikrīditam* in vv. 1, 7, 8, 13, 14, 30, 31, 32, 33, *Praharshinī* in vv. 2, 26; *Vaṁśastha* in v. 3, *Upajāti* in v. 4, *Indravajrā* in v. 5, *Aupachchhandasikam* in v. 6, *Āryā* in vv. 9, 11, 22, 23, *Hariṇī* in v. 10, *Rathoddhatā* in vv. 12, 15, *Anushṭubh* in vv. 16, 17, 18, 19, 29, *Vasantatilakā* in vv. 20, 24, 25, 27, 28, *Pushpitāgrā* in v. 21, *Sragdharā* in v. 34.

1 ⁴श्रीं स्वस्ति । सिद्धार्थस्य पराथैंसुस्थित मतेस्त्तनागमं[भ्य]-
2 क्षिद्दिक्षिद्दिमनुत्तरां भगवतस्तस्य प्रजासु क्रिया-
स्वत-

3 यस्वैधातुकसर्व्वसिद्धिपदवीरल्युग्रवीर्योदया-
व्जिला
त्[।*]

4 निर्हंतिमाससाद सुगतस्त्वर्वांघभूमीश्वर:- [॥*१॥] सौभाग्यन्दध
5 गोपाल: पतिरभवच्चुन्धरायाः [।*]
दतुलं स्त्रियस्त्वपत्न्या

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[1] *Ind. Ant.*, Vol. VII, p. 16; cf. Fleet, C.I.I., Vol. III, p. 32, footnote 7

[2] It may be noted here that the term *vīthī* is also used in the sense of a division in the Ghughrahati plates of Samāchāradēva which have been edited by Mr R. D. Banerji, in the August 1910 number of the *Journal of the Asiatic Society of Bengal*. Mr Bhattasal, who is re-editing the grant for this journal, seems to take the word in its usual sense, but, in the light of this Nālandā document, his rendering cannot hold good

[3] The reading can also be *sūnu*

[4] Expressed by a symbol.

[5] Kielhorn has °चित्र°

6　　　　　　　　　　　　　　　　　　　　　　　ट-

ष्टास्ते सति क्रतिनां सुराग्नि यस्मिन् श्रवेयाः पृथुसगरादयोप्यभूवन् [॥२*॥]
विजिल्य येना जलधेर्व्वसुन्धराम्विमोचिता

7　　　　　　　　　　　　　　मोघपरिग्रहा इति ।

सवाप्यसृद्राप्यविलोचनागुनर्व्वैनैषु व(ब)भ्नूट्ट्रष्ट्रश्र्म्मंतज्ज्ञाः ॥[३॥*] चलत्स-
न्नर्त्तषु व(ब)लीषु यस्य विश्वभरा-

8　　　　　　　　　　　या निचितं रजोभिः ॥¹

पाद्प्रचारच्चममस्तरिच्चन्विश्चृन्द्रमानां सुचिरम्व(म्व)भूत्र ॥[४॥*] ग्रास्त्रार्थभाजा
चलतोनुग्रास्य वर्ण्णां-ग्रतिछापय-

9　　　　　　　　　　　　　ता खधर्म्मे[॥*]

श्रीधर्म्मपालेन सुतेन सोभूत्सगर्ग्थितानामसृण: पितृणाम्² ॥[५॥*] भवलै-
रिव जङ्घमैयंदोयैविंचलङ्घिर्द्दिरदैः कदर्थ्यमाना ।

10　　निस्रपल्लवमस्व(म्व)रं प्रपेदे ग्ररण्यं रेणुनिमेन भूतधात्रो ॥[६॥*] कोदारे
विधिनोपयुक्तपयसां गंगासमेतेःस्वु(ब्बु)धीं ।⁴ गोकर्ण्णादिषु चाप्यनुछि-

11　　　　　　तवतान्तीर्थेषु धर्म्याः क्रिया: [॥*]

भृत्यानां सुखमेव यस्य सकलानुदृत्य दुष्टानिमांल्लोकान्साधयतो[ऽ*]नुषङ्ग्जनिता
सिद्धिः परत्रा-

12　　　　　　　　　　　ब्यभूत् ॥[७॥*]

⁵तैस्तेदिग्विजयावसानसमये संप्रेषितानां परैः सत्कारैरपनीय खेदमखिलं स्तां
सां गतानां भुवम् [॥*] कृत्यं भावयतां

13　　　　　यदीयसुचितं म्रीत्या चृपाणामभूत्

सोल्काग्रठं हृदयं दिवश्युतवतां जातिस्मराणामिव ॥[८॥*] श्रीपरव(ब)ब्स्य
दुष्तितुः चितिपतिना रा-

14　　　　　　　　　　　ष्ट्रकूट°तिलकस्य ।

रण्णादेव्याः पाणिलग्ग्रहे गृह्मेधिना तेन ॥[९॥*] घ्ततनुरियं लक्ष्मी:
साचात्चितिनुं शरीरिषी ।⁷ किमवनिपते: कौर्त्तिम्-

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¹ Two strokes in place of one.
² Symbol for स् at the end of a *pāda* is peculiar.
³ Kielhorn has समेता°.
⁴ This *danda* could be left out.
⁵ Kielhorn has तैर् सेर् which cannot be correct.
⁶ The way of writing the letter ट is peculiar.
This *daṇḍa* could be left out.

resembling the Kumudasūtra (or sūṇṇ) or the Pālamaka of our record and I refrain from offering a conjecture regarding their identity.

In connection with these place-names, it is interesting to note, that our document supplies one or two territorial terms, which appear to be new. The term *mandala*, as I have remarked above, is here used, as in the grant of Amma II,[1] in the sense of *deśa*, of which *vishaya* was a subdivision. The word '*vīthī*', which generally signifies a market, road-way or the like, appears to have been used, in this charter, in the sense of a division smaller than *vishaya*. Similarly the term '*naya*' seems to imply a like division. The use of these terms would show that *bhukti* was divided into *mandalas* which were subdivided into *vishayas*, the latter being again portioned into *vīthīs* or *nayas*[2] It is noteworthy that our document employs the term *naya* in the case of Rājagṛha *vishaya* and *vīthī* in the case of Gayā *vishaya*. The former occurs regularly after (1) Ajapura, (2) Pilipinkā and (3) Achalā, which lay in the district or *vishaya* of Rājagṛha, while the latter term is to be found in connection with the district or *vishaya* of Gayā only. This would indicate that in the two *vishayas*, which were so contiguous to each other, there were, probably, different subdivisions made, apparently, for revenue purposes, Rājagṛha being subdivided into *nayas* and Gayā into *vīthīs*. Thus, we can say that the villages Nandivanāka and Manivātaka lay in the subdivision or *naya* of Ajapura, Natikā in the *naya* of Achalā, all these falling within the Rājagṛha *vishaya*. The village of Pālamaka, on the other hand, which belonged to the district or *vishaya* of Gayā, lay in the subdivision of Kumudasūtra, i.e., Kumudasūtra-*vīthī*.[3]

TEXT.

Obverse

Metres used: *Śārdūlavikrīḍitam* in vv. 1, 7, 8, 13, 14, 30, 31, 32, 33, *Praharshinī* in vv. 2, 26, *Vamsastha* in v. 3, *Upajāti* in v. 4, *Indravajrā* in v. 5; *Aupachchhandasikam* in v. 6; *Āryā* in vv. 9, 11, 22, 23, *Hariṇī* in v. 10; *Kathoddhatā* in vv. 12, 15; *Anushtubh* in vv. 16, 17, 18, 19, 29; *Vasantatilakā* in vv. 20, 24, 25, 27, 28, *Pushpitāgrā* in v. 21, *Sragdharā* in v. 34.

1 [4]ओं स्वस्ति । सिद्धार्यस्य पराथैसुस्थित[*]मतेस्त्वन्मागंम[भ्य]-
2 स्वत-
  स्विद्धिस्विद्धिमनुत्तरां भगवतस्त्वस्य प्रजासु क्रिया-
3 त्[*]
  यस्त्वैधातुकसर्वसिद्धिपदवीरत्यूर्ध्यवीर्यादया-
  ज्जिला
4 निहंतिमासाद सुगतस्त्वर्थैभूमेश्वर:- [॥*१॥] सौभाग्यन्दध
5 दत्तं चिय:स्वप्रत्या
  गोपाल: पतिरभवद्दुन्धरायाः [।*]

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[1] *Ind. Ant.*, Vol. VII, p. 16; cf. Fleet, C. I. I., Vol. III, p. 32, footnote 7.
[2] It may be noted here that the term *vīthī* is also used in the sense of a division in the Ghughrahati plates of Samāchāradeva which have been edited by Mr. R. D. Banerji, in the August 1910 number of the *Journal of the Asiatic Society of Bengal*. Mr. Bhattasali, who is re-editing the grant for this journal, seems to take the word in its usual sense, but, in the light of this Nālandā document, his rendering cannot hold good.
[3] The reading can also be *sū̃* ṇṇ
[4] Expressed by a symbol.
[5] Kielhorn has ष्टिर°

6   दृ-

टान्ते सति क्षतिनां सुराझि यस्मिन् अख्वेयाः पृथुसगराद्योऽप्यभूवन् [॥२*॥]
विजित्य येना जलधेर्व्वसुन्धरामिवमोचिता

7   मीघपरियहा इति।

सवाय्सुद्राप्यविलोचनाग्पुनर्वैनेषु व(ब)भूस्ट्टश्रुमितक्षजाः ॥[३॥*] चलत्स-
न्नन्तेषु व(ब)ल्तेषु यस्य विश्वभरा-

8   या निचितं रजोभिः ॥[1]

पाद्प्रचारत्नमस्त्रित्त्चम्बिश्रुझ्रमानां सुचिरम्व(स्व)भूव ॥[४॥*] यास्त्रार्थभाजा
चलतोनुधास्य स्वर्णाग्प्रतिष्ठापय-

9   ता स्वधर्म्मे[।*]

त्र्योधर्म्मपालेन सुतेन सोभूत्स्वर्गस्थितानामनृणः पितृणाम् ॥[५॥*] पच्चलै-
रिव जन्ग्मैर्यंदोयैविंचलद्दिर्दिर्दैः कदर्थ्यमाना ।

10

निरप्प्लवमस्व(स्ब)रं प्रपेदे शरणं रेणुनिमेन भूतधात्रो ॥[६॥*] कोदारे
विधिनोपयुक्तपयसां गंगासमेतेंऽस्व(स्बु)धौ ।[4] गोकर्णादिषु चाप्यनुष्ठि-

11   तवतान्तीर्थेषु धर्म्याः क्रिया: [।*]

भृत्यानां सुखमेव यस्य सकलानुदृत्य दुष्टानिमाग्लोकान्साधयतो[ऽ*]नुषङ्गजनिता
सिद्धिः परच्चा-

12   य्यभूत् ॥[७॥*]

‘तैस्तैर्दिग्विजयावसानसमये संप्रेधिताग्नां परैः सत्कारैरपनीय खेदमखिलं स्वां
स्वां गतानां भुवम् [।*] क्र्त्वं भावयतां

13   यदीयसुचितं प्रीत्या नृपाणामभूत्

सोल्कण्ठं हृदय दिवस्युतवतां जातिस्मराणामिव ॥[८॥*] त्र्योपरव(ब)स्य
दुहितः क्षितिपतिना रा-

14   त्रिकूट[6]तिलकस्य ।

रण्णादेव्याः पाणिग्रंण्टहे रुद्धमेधिना तेन ॥[९॥*] छततनुरियं लक्ष्मोः
साचात्क्षितिनुं शरीरिणी ।[5] किमवनिपते: कौत्तिर्मूं-

15　　　　　　　　　　　　　　　　त्तौश्वा रष्टदेवता[।*]

इति विदधतो गुच्याचा[रा*] वितर्कवती: प्रजा: प्रकृतिगुरुभिर्या गुदान्त-
भुगौरकरोदघ: ॥[१०॥*] श्लाघ्या म(प)तिव्रत्तादो मु-

16　　　　　　　　　　　ज्जारलं समुद्रगुज्जिरिव ।

श्रीदेवपालदेवम्पुसनवर्ष्मं सुतमद्भुत ॥[११॥*] निर्मल्लो मनसि वाचि
संयत: ।¹ कायकर्म्मनि(गि)च य: स्थित: शुचौ[।*]

17　　राज्यमाप निरुपप्लवस्मितुर्वी(र्वो)धिसत्व इव श्रीगतं पदम् ॥[१२॥*]
भ्राम्यद्द्विविजयक्रमेण ।² करिभिस्तामेव विन्ध्याटवीसुद्दाम्भ्रवमानवा(वा)प्पय-

18　　　　　　　[मो] दृष्टा: पुनर्वे(र्वे)³ न्यव:[।*]

कस्वो(स्वो)जेषु च यस्य वाजिषु[र*]भिर्ध्वस्तान्वराजोॲसो द्विपार्मिचितचारि-
द्विषितरवा: कान्ताविरप्रीगिता:⁴ ॥[१३॥*] य: पूर्व व(व)क्ति-

19　　　　　　　　ना कृत: कृतयुगी चेनागमद्भार्गव-
स्खेतायां प्रद्वत: प्रियप्रगयिना कार्गर्गेन यो द्वापरे । विच्छिन्न: कलिना
घकद्विपि गते कालेन लोकान्त-

20　　　　　　　　　　　　　　रम्
येन त्यागपयस्क एव द्वि पुनर्द्दिसष्टसुन्मोक्षित: ॥[१४॥*] आ गड्डागम-
मच्चिताल्पद्मगूल्न्यामासेतु(तो:)⁵ प्रचितदशास्यकेतुकीर्त्तं[।*] उर्व्वीमा वङ्ग-

21　　　　　　　निकेतनाच्च सिन्धो-
रा लक्ष्मीकुलभवनाच्च यो बु(बु)भोज ॥[१५॥*]
स खलु भागीरथ्योपथप्रवर्त्तमाननानाविधनौवाटकसंपादितसेतुव(व)न्धनिचित[मे]-

22　　लयिखर्म्येणिविभ्रमात्⁶ निरतिशयघनघनाघनघट्टा(टा)भ्यामायमानवासरलक्ष्मी-
श्रभारब्ध(ख)संततजलदसमयसन्देष्णत्⁷ उदीचीनानिक-

23　　　　　　नरपतिप्राभृतीकृतताम्रमेयहयवाद्भिनी-
खरखरोत्खातधूलीधूसरितदिगन्तरालात् परमेश्वरसेवासमायाताधेपजंबू(बू)द्वी-
पभूपाल-

24　　　　　　पादातभरनमद्भवनै: श्रीसुद्गगिरिसमावाचिश्रीमच्चयख्रब्धावारात् परमसौगत-
परमेश्वरपरमभटा(ट्टा)रकम-

¹ This danda could well be omitted.
² This danda is unnecessary.
³ Kielhorn gave नाम्वा:
⁴ Kielhorn has चिर वीचिता:
⁵ Kielhorn read सेतो: and remarked that the lithograph he used gave setu (or bhetu). This inscription removes the possibility of bhetu. The reading must be सेतो:
⁶ Read °कार्मि्र°.
⁷ Read °इत्त्यादिदोषो°.

B —Reverse

SEAL

(FROM IMPRESSION)

(FROM PHOTO)

25   घराजाधिराजश्रोधर्म्मंपालदेवपादानुध्यात:

परमसौगत: परमेश्वर: परमभटा(ट्टा)रको महाराजाधिराज: श्रीमान्देवपा-

26   लदेव:

कुशली । श्रीनगरभुक्त्तौ राजगृहविषयान्त:पाति अज्ञपुरनयप्रतिव(ब)द्ध-
स्वसम्व(म्ब)द्धाविच्छिन्नतलोपेत । नन्दिवनाक । मणि-

27   वाटक । पिलिपिष्कानयप्रतिव(ब) नटिका । अ-
चलानयप्रतिव(ब)द्ध च[स्ति]ग्राम । गयाविषयान्त:पातिकुसुदस्थ्र् चषोथी-
प्रतिव(ब)द्ध पालाम-

28   कग्रामेषु । ससुपगताम्(न्) सर्व्वानेव राज-
राणक । राजपुत्र । राजामात्य । महाकात्तौक्तिक । महादण्डनायक ।
महाप्रतीहार । महा-

29   सामन्त ।
महादौ:साधसाधनिक । महाकुमारा[मा*]त्य [।*] प्रमाढ । मरभङ्ग[।*]
राजस्थानी । योपरिक² । विषयपति [।*] दाशापराधिक । चौरोद्धर-

30   ण्यिक । दाण्डि-
क [।*] दाग्डपाष्मिक [।*] शौल्किक [।*] [गौ]ल्मिक । दोचपाल [।*] कोटपाल ।
खण्डरच [।*] तदायुक्तक । विनियुक्तक । हस्त्यश्वोष्ट्रनौव(ब)लव्याष्ट्र-

31   तक[।*]
किशोरवडवागोमहिष्यधिक्कत । दूतप्रे[ष]ण्यिक । गमागमिक । अभित्व-
रमाणक । तरिक । तरपतिक । श्रोद्र(द्व)-मालव-खश्य-कुलिक । कर्णो-

32   ट [ह्र]ष ।
चाटभ[ट*]सेवकादीनन्याश्चाकीर्त्तितान् स्वपादपद्मोपजीविन: प्रतिवासि-
नश्च ब्राह्म(ब्राह्म)णोत्तरान् महत्तमकुटुम्बि(म्बि)पुरोगमेदान्भु-

33   क । चण्डाल-
पर्य्यन्तान् समाज्ञापयति विदितमस्तु भवताम् यथोपरिलिखितस्वसम्व(म्ब)-
द्धाविच्छिन्नतलोपेत नन्दिवनाकग्रास । मणिवाट-

34   . कग्राम ।
नटिकाग्राम । हस्तिग्राम । पालासकग्रामा: ससीमात्र्णयूतिगोचरपर्य्यन्ता:
सतला: सोद्देशा: साम्रमधूका: सजलस्थ-

35   ला:
सोपरिकरा: सदशापराधा: सचौरोद्धरणा: परिहृतसर्व्व(पीडा:) अचाटभटप्रवेश
अकिंचित्प्रग्रा[ह्य]राजकुलीय-

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36 समस्तप्रत्यायसमेता भूमिरिच्छ-
द्रव्यायिनाचन्द्रार्कंक्षितिसमकालम् पूर्व्वदत्तभुक्तभुज्यमानदेवव्र(ब्र)ह्मदेयवर्जिता:
मया

37 मातापित्रोरात्मन[श्च] पुण्ययशोभिवृद्धये ॥
सुव[र्ण्ण]द्वीपाधिपम[श्च]राजश्रीवा(बा)लपुत्रदेवेन दूतकसुबेन वयम्विज्ञा-
पिता: यथा मया

38 श्रीनालन्दायाम्विद्वार: कारितस्तच्च
भगवतो बु(बु)द्धभट्टारकस्य प्रज्ञापारमितादिसकलधर्म्मनैचीस्थानस्यायार्थं तांत्र(त्रि)-
39 कवो(बो)धिसत्वगणस्याष्टमहापुरुषपुद्गलस्य
चातुर्द्दिग्मार्यभिचुसङ्घस्य व(ब)लिचरुसत्त्वोवरपिण्डपातश्यनासनग्लानप्रत्ययभे-
40 षज्यार्थं धर्म्म-
रत्नस्य लेखनार्थं विद्वारस्य च खण्डस्फुटितसमाधानार्थं ग्रासनीक्षत्य
प्रतिपादित[१*]: यतो भवद्भि: सर्व्वैरेव
41 भूमेर्द्दानपाल[न*]गौरवादपहरणे
च महानरकपातादिभयाद्घानमिदमभ्यनुमोद्य पालनीयं प्रतिवासिभिरप्याज्ञा:श्र-
42 वणविधेयै-
र्भूत्वा यथाकालं ससुचितभागभोगकरहिरण्यादिप्रत्यायोपनय: कार्य इति ॥
सम्वत् ६९ क(का)र्त्तिक दिने २१

Reverse.

43 तथाच धर्म्मानुग्य[1]न्सनश्लोका:
व(ब)द्भिर्व्वसुधा दत्ता राजभि:

44 सगरादिभि [१*]
यस्य यस्य यदा भूमिस्तस्य तस्य तदा फलम् ॥[१६॥]

45 खदत्ताम्परदत्ताम्वा [यो] ह[रे]त वसुन्धरा ।
स विष्ठायां क्रमिर्भूत्वा पिट्टभि:

46 सह पच्यते ॥[१७*॥]
ष्टछिम्व्यर्षसह[स्रा]णि स्वर्गं मोदति भूमिद: । आछेत्ता चानुमन्ता च
तान्येव

47 नरके वसेत् ॥[१८*॥]
अन्यदत्तां द्विजातिभ्यो यत्नाद्रक्ष युधिष्ठिर । महीं महीक्षितां श्रेष्ठ दा-

48　　　　　　　　　　　　　　　　नाच्छ्रेयो नु पालनम् ॥[१८*॥]

अस्मत्कुलक्रममुदारमुदा[व]रन्यैध दानमिदमभ्यनुमोदनीयं ।　लच्म्यास्त-
ड्डिल्वलिलवुद्धु(बुद्धु)द[चं]-

49　　　　　　　　　　　　　　　　　　　चलाया

दानं फलं परयशःपरिपालनं च ॥[२०*॥] इति कमलदलाम्बु(म्बु)वि(बि)-
न्दुलीलां श्रियमनुचिन्त्य मनुष्यजीवितं च [।*] सकलमि-

50　　　　　　　　　　　　　दसुदाह्नतं च वु(बु)[ध्वा]

न चि मुरुपैः परकीर्त्तयो विलोप्याः ॥[२१*॥] दचिणभुज इव राज्ञः
परव(ब)लदलने सहायनिरपेच्यः ।[।*]

51　　　　　　दूलं श्रीव(ब)लवर्म्मा विदधे धर्म्माधिकारे'स्मिन् ॥[२२*॥]

अस्मिन् धर्म्मारम्भे दूलं श्रौदेवपालदेवस्य ।　विदधे श्रीव(ब)लवर्म्मा
व्याघ्रतटीमगडलाधिपतिः ॥[२३*॥]

52　　　　　　　　　　आसीदग्रेषनरपालविलोलमौलि-

मालासगिध्युतिविवो(बो)धितपादपद्मः ।　शैलेन्द्रवशतिलको यवभूमिपालः
श्रीवीरवैरिमथना-

53　　　　　　　　　　　नुगताभिधानः ॥[२४*॥]

चम्यंखलेषु कुसुदेषु हृषालिनीषु यच्छेन्दुकुन्दतुचिनेषु पदन्दधाना । निःशेष-
दिड्मुखनिरन्तरलव्य(ब्य)गीतिः

54　　　　　मूर्त्तेव यस्य भुवनानि जगाम कीर्त्तिः ॥[२५*]

सुभद्रे भवति नृप'स्य यस्य कोपान्नि[भि]न्नाः　सच　हृदयैर्द्विधां
श्रियोपि ।　वक्राणामि-

55　　　　　　　　　　ध हि परोपघातदच्या

जायन्ते जगति भूषं'ह्वतिप्रकाराः ॥[२६*॥] तस्याभवन्नयपराक्रमशोलशाली
राजेन्द्रमौलिघतदुर्ल्लंक्षितार्न्धि-

56　　　　　　　　　　　　　　　　युग्मः ।

सुतयु'धिष्ठिरपराशरभीमसेनकर्ण्णांर्ज्जुनार्ज्जितयशाः　समराग्रवीरः* ।[।२७*॥]
उष्णूतम'म्व(म्ब)रतलाघ(घु)धि सच्चरन्त्या यत्सेनयावनिरजःप-

57　　　　　　　　　　　　　टल पदोत्थम् ।

कर्ण्णानिलेन करिणां घनकस्वितीर्ण्णगंण्डस्थलीमदजलैः　शमयाम्व(म्ब)-
भूच ।[।२८*॥] अकृष्णपच्चमेवेदमभूद्भुवनमण्डलं ।

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1 The use of *avagraha* may be marked.
2 This *danda* is unnecessary
3 Read भृष्° Symbol for *sh* is used for that of *ś*,
4 Or °धीरः.
5 It is better to read मान्र्°

2 ꭲ

58　कुलन्दैल्याधिपस्येव यदयशोभिरनारतम् ॥[२८*]
पौलोमोव सुराधिपस्य विदिता सङ्कल्पयोनिरिव [प्रीति:]¹ शैलसुतेव मन्मथरि-
पोज्ज्ञीसुंरारिरिव ।

59　राज्ञ: सोमकुलान्वयस्य सहतः श्रीधर्मसेतो:² सुता तस्याभूट्वनोच्चुजोऽश्रमविधौ
तारेव ताराह्वया ॥[३०*॥] माया-
यामिव कामदेवविजयी शुद्धोदनस्यात्मज:

60　स्कन्दो नन्दितदेवबन्दहृदय: यच्चोरुमायामिव । तस्यान्तस्य नरेन्द्रवन्दवि-
नमत्पादारवि-
न्दासन:

61　सर्वोर्वोपतिगर्व्वगर्व्वणचण: श्रीवा(वा)लपुत्रोऽभवत्⁴ ॥[३१*॥] नालन्दागुण-
वन्दलुब्ध(ब्ध)मनसा भक्त्या च श्रौद्धोदनेवुं(बुं)ध्वा शैलसरित्तरंगतरलां
लच्मीमिसां चोभनाम् ।

62　यस्तेनोन्नतसौधधामधवल: सङ्घार्थमिन्त्रक्रिया नानासत्त्रुणभिच्चुसङ्घवसतिस्तस्या-
श्चिवार: कृत: ॥[३२*॥] भक्त्या
तच्च समस्तयच्चुवनितावैधव्यदोच्चागुरं

63　कृत्वा ग्रासनमाच्चितादरतया यत्प्रार्थ्यं दूतैरसौ । ग्रामान् पच्च विपच्चितोपरि-
यग्रोदेग्रा-
निमानात्मन:

64　पित्रो[र्ज्जी]कच्चितोदयाय च ददौ श्रीदेवपालं नृपं ॥[३३*॥] यावच्चिन्धो:
प्रव(व)न्ध: प्रचुलचरजटाचोभिताङ्ग च गङ्गा गुर्वीं

65　धत्ते फणीन्द्र: प्रतिदिनमचलो चेलया यावदुर्वीं ।
यावच्चस्तोदयाद्री रवितुरगखुरोद्धृष्टचूडामणी स्वस्तावच्चल्कोर्त्तिरेषा प्रभव-

66　तु जगसाम्सरिक्रिया रोपयंती ॥[३४*॥]

TRANSLATION

Lines 1-25 are translated in the Mungir grant edited by Kielhorn in *Indian Antiquary*, Vol. XXI, pp 257-258

Ll 26-33　In the Śrīnagara-*bhukti*, at the villages falling within the district (*vishaya*) of Rājagṛiha, namely, Nandivanāka and Manivātaka, which come within the territorial subdivision (*naya*) of Ajapura, together with the undivided lands connected therewith , Naṭikā which comes within the subdivision (*naya*) of Pilipiṇkā and Hastigrāma which comes within the

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¹ Both those letters are doubtful　Sankalpayōm, i e Kāmadēva has four wives, as stated in the *Vishnudharm-ottariya*, III, 72, 21, namely, Rati, Prīti, Sakti and Madaśakti　Either of the two names *Prīti* and *Sakti* will fit in, but the former seems preferable

² May be read as यर्द्धसेतो also

³ The ace of the *avagraha* may be marked.　　　⁴ Ditto.

subdivision (*naya*) of Achalā and the village of Pālāmaka which comes under the subdivision (*vīthī*) of Kumudasūtra (or Kumudasūnu), that falls within the limits of the district (*vishaya*) of Gayā—Dēvapāladēva, being in good health, issues commands to all the persons who have assembled here,—the *Rājarūnaka*[1], the *Rājaputraka*, the *Rājāmātya*, the *Mahākārttākritika*, the *Mahādandanāyaka*, the *Mahāpratīhāra*, the *Mahāsāmanta*, the *Mahādauhsādhasādhanika*, the *Mahākumārāmātya*, the *Pramātṛ*, the *Śarabhanga*, the *Rājasthānīya*, the *Uparika*, the *Vishayapati*, the *Dāśāparādhika*, the *Chauröddharanika*, the *Dāṇḍika*, the *Dāṇḍapāśika*, the *Śaulkika*, the *Gaulmika*, the *Kshētrapāla*, the *Kōṭapāla*, the *Khaṇḍaraksha*, the *Tadāyuktaka* the *Viniyuktaka*, the *Hastyaśiōshtranaubalavyāpṛitaka*, the *Kiśōra-vaḍavā-gō-mahishydhikṛita*, the *Dūtapraishanika*, the *Gamāgamika*, the *Abhitvaramānaka*, the *Tarika*, the *Tarapatika*, the *Oḍras* (men from Orissa), the *Mālavas*, the *Khaśas*, the *Kulikas*, the *Karnnāṭas*, the *Hūṇas*, the *Chāṭas* (or village officers), the *Bhaṭas*, the servants and others, dependent on his lotus-feet, who are not named here, and the residents, the Brahmanōttaras, the village-elders, householders, the *purōgas*, the *Mēdas*, the *Andhrakas* down to the *Chāṇḍālas*—

Ll 33-87   Be it known to you that the above-mentioned villages, namely, the village of Nandivanāka, the village of Manivāṭaka, the village of Naṭikā, the village of Hasti (or Hastigrāma) and the village of Pālāmaka, together with the undivided lands attached to them, unbroken up to their boundaries, grass and pasture-lands,[2] with their grounds, places, mango and *madhūka* (*Bassia Latifolia*) trees, with their water and dry lands, *uparikaras*, *daśāparādhas*, *chauröddharanas*, free from all troubles, exempt from the entry of the *chāṭas* (village officers), and *bhaṭas*, with all taxes due to the king's family or court, with nothing of these to be recovered, according to the maxim of *bhūmichchhidra*, to last as long as the moon and the sun and the earth shall endure, excluding the gifts to gods, and the Brahmans, which were granted before and were enjoyed or are being enjoyed—

Ll 37-42   are granted by us for the increase of the spiritual merit and glory of my parents and of myself.—We being requested by the illustrious Mahārāja Bālaputradēva, the King of Suvarppadvīpa through a messenger "I have caused to be built a monastery at Nālandā" granted by this edict toward the income for the blessed Lord Buddha, the abode of all the leading virtues like the *pra jñāpāramitā*, for the offerings, oblations, shelter, garments, alms beds, the requisites of the sick like medicines, etc., of the assembly of the venerable *bhikshus* of the four quarters (*comprising*) the Bodhisattvas well versed in the *tantras*, and the eight great holy personages (i e the *ariya-puggalas*), for writing the *dharma-ratnas* or Buddhist texts and for the upkeep and repair of the monastery (when) damaged; therefore, this grant should be approved and preserved by all of you[4] out of regard for the merit of protecting gifts of land and because in the confiscation of the same there is a fear of falling into the great hell and the like.   The residents also should be obedient to the order on hearing it and

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[1] Many of these designations hardly admit of translation   They all occur in several grants and have already been noticed by scholars   So they are left untranslated here.

[2] सरब्यूतिगोचर is usually so translated and यूति is practically left untranslated.

[3] Dr. Thomas is of opinion that the term Bōdhisattva is used here to indicate the monks and would read *tatraka* in place of *tāntraka*. He further thinks that *Buddhabhaṭṭārakasya* depends on *sthānasya*. The term *dharmanētrī* occurs in the *Saddharmapundarīka*, I, 10, 79; II, 102, XI, 5, 7   Burnouf translates it "la regle de la loi," i e the rule of the Law "   For *ashṭa   pudgalasya* see Childers, Pāli Dictionary under *ariyapuggalo* and *puggalo*.

[4] Dr. Krom of Leiden also thinks that the message sent by Bālaputra to Dēvapāla is only contained in the words   "*Śrī-Nālandāyām vihārah Kāritah*"; for, if we assume that the message includes the whole passage as far as its (l 42) it is not clear who are meant by the words *bhavadbhih sarvairēva* (l. 40). These words cannot be applied to King Dēvapāla. Evidently they refer to that king's officials mentioned previously. These remarks appear to be justified but then we would require *iti* after *kāritas*.

should bring to the donees at the proper time the due revenues such as *bhāgabhōgakara*, gold, etc." Samvat (year) 39, Kārttika, day 21.

Ll. 43-50. In pursuance thereof are the (following) verses (nos 16-21) announcing duties (regarding grants)[1].

V. 22 The illustrious Balavarmman who was the right hand of the king, as it were, and who never depended on (others') help for crushing hostile forces, acted as messenger in this religious function

V 23 In this religious undertaking Balavarmman, the illustrious ruler of the Vyāghratatī-mandala, acted as a messenger of the illustrious (Emperor) Dēvapāladēva

V 24 There was a King of Yavabhūmi (or Java), who was the ornament of the Śailēndra dynasty, whose lotus-feet bloomed by the lustre of the jewels in the row of trembling diadems on the heads of all the princes, and whose name was conformable to the illustrious tormentor of brave foes (*vīra-vairi-mathana*)

V 25 His fame, incarnate, as it were, by setting its foot on the regions of (white) palaces, in white water-lilies, in lotus plants, conches, moon, jasmine and snow and, being incessantly sung in all the quarters, pervaded the whole universe

V 26 At the time when that king frowned in anger, the fortunes of the enemies also broke down simultaneously with their hearts Indeed the crooked ones in the world have got ways of moving which are very ingenious in striking others[2]

V 27 He had a son, who possessed prudence, prowess, and good conduct, whose two feet fondled too much with hundreds of diadems of mighty kings (bowing down). He was the foremost warrior in battle-fields and his fame was equal to that earned by Yudhisthira, Parāśara, Bhīmasēna, Karnna and Arjuna

V 28. The multitude of the dust of the earth, raised by the feet of his army, moving in the field of battle, was first blown up to the sky by the wind, produced by the (moving) ears of the elephants, and, then slowly settled down on the earth (*again*) by the ichor, poured forth from the cheeks of the elephants

V 29. By the continuous existence of whose fame the world was altogether without the dark fortnight, just like the family of the lord of the *daityas* (demons) was without the partisanship of Kṛṣhna[3].

V. 30 As Paulōmī was known to be (the wife of) the lord of the *Suras*, (i e. Indra) Rati[4] the wife of the mind-born (Cupid), the daughter of the mountain (Pārvatī), of the enemy of Cupid (i e Śiva) and Lakshmī of the enemy of Mura (i e Vishnu) so Tārā was the queen consort of that king, and was the daughter of the great ruler Dharmasētu[5] of the lunar race and resembled Tārā (the Buddhist goddess of this name) herself

V 31 As the son of Śuddhōdana, (i e the Buddha) the conqueror of Kāmadēva, was born of Māyā and Skanda, who delighted the heart of the host of gods, was born of Umā by Śiva, so was born of her by that king, the illustrious Bālaputra, who was expert in crushing the pride

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[1] Here come six imprecatory and benedictory stanzas, too well-known to be translated The stanza सर्व्वानेतान् भाविनः पार्थिवेन्द्रान् which is given in the Mungir grant is here left out

[2] The eyebrows become crooked in frowning and the poet by way of *arthāntara-nyāsa* draws a general inference from it

[3] Pun on the words *Kṛṣhna* and *paksha*. Fame is white or bright cf भाविन्य ज्योति पापे यशसि धवलता यद्वत्ते राजकीर्य्यो "Sāhityadarpana," VII-23.

[4] The exact word which certainly has only two letters is not distinct. It may be either Prīti or Śakti as noted above, f n., p. 324. That Rati is meant is absolutely clear from the context.

[5] This name can be read as Varmasētu also.

of all the rulers of the world, and before whose foot-stool (the seat where his lotus-feet rested) the groups of princes bowed

V 32. With the mind attracted by the manifold excellences of Nālandā and through devotion to the son of Śuddhōdana (the Buddha) and having realised that riches was fickle like the waves of a mountain stream, he whose fame was like that of Sanghārthamitra[1], built there (at Nālandā) a monastery which was the abode of the assembly of monks of various good qualities and was white with the series of stuccoed and lofty dwellings.

V 33 Having requested, King Dēvapāladēva, who was the preceptor for initiating into widowhood the wives of all the enemies, through envoys, very respectfully and out of devotion and issuing a charter, (he) granted these five villages, whose purpose has been noticed above for the welfare of himself, his parents and the world

V. 34. As long as there is the continuance of the ocean, or the Ganges has her limbs (the currents of water) agitated by the extensive plaited hair of Hara (Śiva), as long as the immovable king of snakes (Śesha) lightly bears the heavy and extensive earth every day and as long as the (Udaya) Eastern and (Asta) Western mountains have their crest jewels scratched by the hoofs of the horses of the Sun so long may this meritorious act, setting up virtues over the world, endure

No 18—MATTEPAD PLATES OF DAMODARAVARMAN.

By Professor E Hultzsch, Ph.D., Halle (Saale)

This inscription is engraved on five very thin copper-plates, which were found in the village of Mattepād in the Ongole Tāluk of the Guntūr District and forwarded to Rao Bahadur H Krishna Sastri by the Tahsildar of Nellore   The plates measure 6⅔ inches in breadth and 1⅕ inches in height   There are eight inscribed faces, the outer faces of the first and last plates having been left blank   Each inscribed face bears only two lines of writing   The margins of the plates are not raised into rims, but the writing is in fair preservation   The five copper-plates are strung on a ring of the same metal, passing through a hole of about ⅜" in diameter on the left side of the writing   The two ends of the ring, which is about 2½" in diameter, are fixed in the base of an oval seal, which is much worn; it seems to bear, in relief, the figure of a seated bull, facing the proper right.   The weight of the plates, with ring and seal, is 30¼ tolas

The alphabet is of an early Southern type · The Jihvāmūlīya occurs in line 7, and the Upadhmānīya in line 16, final forms of t and m in lines 1, 7, and 15, 16 (twice), respectively. As in the case of the plates of Chārudēvī (above, Vol VIII, No. 12) and of Vijaya-Dēvavarman (Vol IX, No 7), the eight inscribed faces are numbered consecutively, like the pages of a modern book, with the numerical symbols 2, [3], 4, 5, 6, 7, 8 on the left margin; the first plate seems to bear, just as that of Dēvavarman,[2] the sacred syllable ōm in the place of the figure 1   The symbol 2 occurs also in the date (l. 14), and the symbol 1 repeatedly in lines 8-13

The language of the plates is Sanskrit mixed with Prākṛit. Lines 1-14 are in prose, and the two last lines in verse   In the Sanskrit portion consonants following r are doubled, with the exception of t in kartum= and of h in arhanti (l 6). The Sandhi is neglected after °purāt (l 1), °tasya and -sagōtrasya (l. 2), -grāmēyakāh (l 4), -grāmah (l 5), and bhūmih (l 15)

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[1] This might possibly mean that his wealth befriended the cause of the Sangha.
[2] See above, Vol IX, p. 57.

In lines 8-13 the proper names of the donees and most of the names of their *gōtras*[1] are given in Prākṛit, and in line 14 the Prākṛit form -*samachehharam* occurs. The only other declensional forms are the nominative singular *amśo* (for which we would have expected *aṁśo*) and the genitive singular -*ayyassa* (= -*āryasya* in Sanskrit) in lines 8-13. The vowel *au* has become *o* in *Kondinna* (= *Kauṇḍinya*, ll 8-11) Sanskrit *p* and *b* have been changed to *v* in *Kassava* (= *Kāśyapa*, l 11 f) and *Savarayja* (= *Śabarārya*, l 10) Consonant groups are assimilated, but *śrī* is represented by *siri* in *Sirijja* (l 9). This name, as well as *Nandijja*[2] (= *Nandyārya*, ll 8, 13), *Aggijja* (= *Agnyārya*, ll 9, 11), *Āgasti* (= *Agastya*, l 13), and *Venujja*[3] (for which we would have expected *Venhujja* = *Vishṇiārya*, l 12), are instances of Samprasāraṇa (*i* = *ya*, and *u* = *va*).

The inscription records that, in the 2nd year of his reign (l 14), the Mahārāja Dāmōdara-varman (l 3) granted the village of Kangūra to a number of Brāhmaṇas He was a wor-shipper of 'the truly and perfectly Enlightened one' (*Samyak-sambuddha*, l 1), i e of the Buddha At the same time he boasts of having performed certain Brāhmaṇical rites, viz. Gō-sahasra and Hiraṇyagarbha (l 2 f) These are the names of the second and fifth of the sixteen so-called 'great gifts' (*mahādāna*) of the Purāṇas[4] A similar feat is ascribed to king Attivarman in another copper-plate grant from the Guntūr District, where I translate the epithet *aprameya-Hiraṇyagarbha-prasavena*[5] by 'who is a producer of (i e who has performed) innumerable *Hiraṇyagarbhas*' That this Attivarman (whose name seems to be a Prākritic or Dravidian form of Hastivarman) belonged to the same dynasty as Dāmōdaravarman, is evident from the fact that his family is stated to be 'descended from the lineage of the great sage Ānanda' (ibid., text l 1) while Dāmōdaravarman claims to have belonged to the *gōtra* of Ānanda (below, text l 2) Moreover, Dāmōdaravarman resided at a city called Kandarapura (below, text l 1), which must have received its name from that prince Kandara who is mentioned as an ancestor of Attivarman[6] The characters of the copper-plate grant of this king are decidedly more developed than those of the subjoined grant, which, besides, is partially in Prākṛit, while the former is all in Sanskrit. Consequently, Dāmōdaravarman must have been one of the predecessors of Attivarman

When editing the Gōrantla plates of Attivarman, my late lamented friend Fleet believed this king to have been a Pallava,[7]—chiefly because he interpreted the epithet *aprameya-Hiraṇyagarbha-prasavena* by 'who is of the posterity of the inscrutable (god) Hiraṇyagarbha.' As I have shown above, this rendering is inadmissible in the light of the corresponding epithet used in the fresh plates, and Fleet himself had since withdrawn his original opinion in his *Dynasties of the Kanarese Districts*, second edition, p. 334 Henceforth Kandara, Dāmōdaravarman, and Attivarman (Hastivarman) may be designated as 'kings of the family of Ānanda.'

The two localities mentioned in the subjoined inscription—Kandarapura (l 1) and Kan-gūra (l 4 f)—I am unable to identify But the first of the two villages referred to in the grant of Attivarman—Tānrikonra[8]—is probably identical with Tādikonda, 10 miles north of Guntūr[9] and south of the Krishnā river, and the second village—Āntukkūra[10]—with Gani-Ātukūru, west

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[1] In line 13 the names of the *gōtras* are in Sanskrit

[2] Cf *Nandiji* and *Gonandija*, above, Vol. I, p 6, text L 21, and Vol. VI, p 87, text l. 9

[3] Cf *Rudarenshuja*, above, Vol. VI, p. 317, text l. 16

[4] See Hēmādri's *Dānakhanda*, chapter 5, and cf also *Ep Ind*, Vol. I, p 368, verse 18 and note 58

[5] *Ind. Ant.*, Vol IX, p 102, text l. 3

[6] Loc. cit., text l. 2. These coincidences were first pointed out in the Madras Epigraphical Report for 1920, p 35.

[7] See *Ind. Ant.*, Vol IX, p 102.

[8] *Ind. Ant.*, Vol. IX, p 103, text l. 7. Fleet read *Tānthikonthа*

[9] See Mr R Sewell's *Lists*, Vol. I, p 76.

[10] *Ind. Ant*, Vol. IX, p 103, text l. 8.

SCALE FULL SIZE
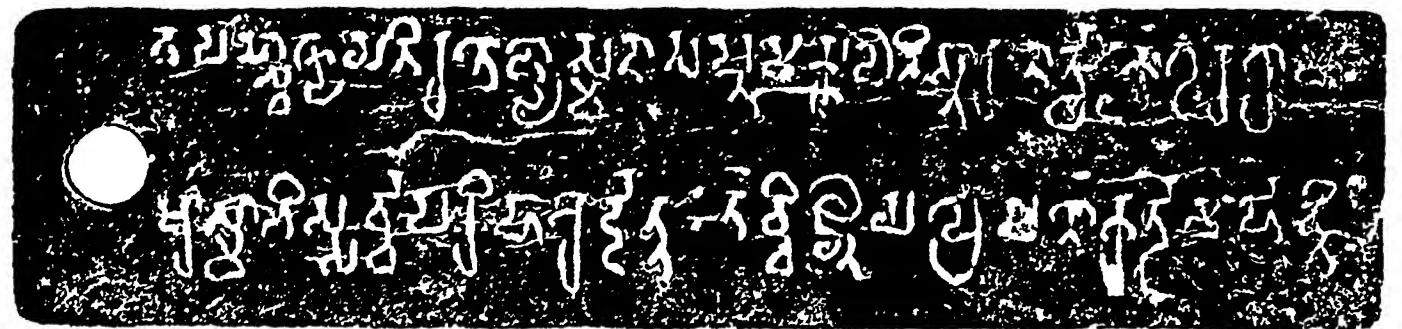
of Bezvāda [1]　Gōrantla, where the plates of Attivarman were obtained,[2] is 4 miles north of Guntūr [3]　Finally, Venkayya's Report for 1900, pp 5, 35, notes a much defaced Sanskrit inscription mentioning the daughter of king Kandara of the Ānanda *gōtra*, at Chēzarla, west of Guntūr.

TEXT [4]

First Plate ; Second Side

1　विजयकम्टरपुरस्त् [भ]गवतः सम्यक्संबुद्धस्य पादानुध्या-

2　तस्य आ[न]न्दसगोत्रस्य अ[वन्ध्य]गोसच[स्ने]कचिरख्-

Second Plate , First Side

3　गर्भोद्भवोद्भवस्य मद्याराजश्रीदामोदरवर्म्मणो वचनेन

4　कंगूरग्रामेयका(ः) वक्तव्या: [।*] एम्थी ब्राह्मणे[भ्यी] नानागोत्रचरण-

Second Plate , Second Side

5　तपस्खाध्यायनिरतेभ्योसदाससम्कुलनिस्सारण्[।*]त्थं कंगूरग्रामः

6　अस्माभिस्सर्व्वंपरिहारैर्हृत्तः [।] तंव्विद्याय [5] प्रे[ष]णं कर्तुमर्हन्ति [।]

Third Plate , First Side.

7　एषां ब्राह्मणानां गोचनामविभागादंशविभागक्रियते [।*] पूर्व्वन्तावत्

8　कौण्डिन्नबहृज्यस्स अंशो १ कौण्डिन्ननन्दिज्यस्स अंशो १ कौण्डिन्नखन्दज्यस्स
　　अंशो

Third Plate ; Second Side.

9　कौण्डिन्नभवज्यस्स अंशो १ कौण्डिन्नअग्निज्यस्स अंशो १ कौण्डिन्नसिरि-
　　ज्यस्स अंशो

10　पुन: कौण्डिन्नभवज्यस्स अंशो १ कौण्डिन्नखन्दज्यस्स अंशो १ कौण्डिन्न-
　　समरज्यस्स अं[शो]

Fourth Plate ; First Side.

11　कौण्डिन्नअग्निज्यस्स अंशो १ कौण्डिन्नवीरज्यस्स अंशो १ काश्यवदामज्यस्स
　　[अंशो]

12　काश्यवकुमारज्यस्स अंशो १ काश्यवविष्णुज्यस्स अंशो १ कास्य[वदे]वज्यस्स
　　अंशो

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1 See above, Vol. VIII, p 10.
2 *Ind Ant*, Vol IX, p 102.　　　3 Mr Sewell's *Lists*, Vol. I, p. 74.
4 From ink-impressions supplied by Rao Bahadur H. Krishna Sastri.
5 Read तद्विद्याय.

Fourth Plate, Second Side

13 काश्यपनन्दिद्व्जस्य अंशो १ वत्सदोणव्जस्य अंशो आगस्तिभद्दज्जस्य
अंशो १¹ [।*]

14 विजयसवच्छर २ वार्त्तिकशुक्लपच्चस्य चयोदश्यां पट्टिका दत्ता [।*]

Fifth Plate, First Side

15 वहुभिर्व्वसुधा दत्ता वहुभिश्चानुपालिता [।*] यस्य यस्य यदा भूमिः²
तस्य तस्य तदा फलम् ॥

16 सदत्ता परदत्तां वा यो हरेतु वसुन्धराम् [।] गवां ³गतसहस्रस्य
हन्तुरपिवति दुष्कृतम् ॥

TRANSLATION

(Line 1) From Kandarapura, (the city) of victory, the villagers of Kangūra have to be addressed (as follows) by the word of the glorious Mahārāja Dāmōdaravarman, who meditates on the feet of the blessed Samyak-sambuddha; who belongs to the *gōtra* of Ānanda; (and) who is the origin of the production (i e. who has caused the performance) of many *Hiraṇya-garbhas*⁴ and of (gifts of) thousands of pregnant cows

(L 4.) 'For the sake of Our salvation as far as the seventh generation, the village of Kaṅgūra has been given by Us, with all exemptions, to the following Brāhmaṇas of various *gōtras* and *charaṇas*, and practising austerities and recital of their sacred texts Knowing this (the villagers) should render service (to them).'

(L 7) The allotment of shares is (now) made to these Brāhmaṇas, with specification of (their) *gōtras* and names First then, to the Kondinna Ruddajja (Rudrārya) 1 share; to the Kondinna Nandijja (Nandyārya) 1 share, to the Kondinna Khandajja (Skandārya) (1) share; to the Kondinna Bhavajja (Bhavārya) 1 share, to the Kondinna Aggijja (Agnyārya) 1 share; to the Kondinna Sirijja (Sryārya) (1) share, again to the Kondinna Bhavajja 1 share, to the Kondinna Khandajja 1 share, to the Kondinna Savarajja (Śabarārya) (1) share; to the Kondinna Aggijja 1 share, to the Kondinna Virajja (Virārya) 1 share, to the Kassava Dāmajja (Dāmārya) (1) share, to the Kassava Kumārajja (Kumārārya) 1 share, to the Kassava Venujja (Vishṇvārya) 1 share; to the Kassava Devajja (Dōvārya) (1) share, to the Kāśyapa Nandijja 1 share, to the Vatsa Doṇajja (Drōnārya) 1 share, to the Āgasti Bhaddajja (Bhadrārya) 1 share.

(L 14) (In) the year of victory 2, on the thirteenth (tithi) of the bright fortnight of Kārttika, (this) set of plates⁵ has been given (to the donees)

[Line 15 f contain two of the customary ślōkas]

No 19 —URLAM PLATES OF HASTIVARMAN, THE YEAR 80.

BY PROFESSOR E HULTZSCH, PH D , HALLE (SAALE)

This is a set of three copper-plates, measuring 7½ inches in breadth and 2½ inches in height The outer face of the first plate has been left blank, while the second and third plates

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¹ अंशो १ is entered below the line.   ² Read भूमिस्°.

³ Read हत°

⁴ See the introductory remarks.

⁵ *paṭṭikā* is used in the same sense in other copper-plate grants See above, Vol. I, p. 7, text l. 51; Vol. VI, p 14 text l. 18 , p 88, text l. 28 , p 318, text l. 40 , Vol. VIII, p. 240, text l. 40,

tion of a Gāṅga grant in Vol XIII, p 216　As I have shown in Vol VII, p 107, note 4, *akhaśālī*, the person to whom the engraving of copper-plate grants is entrusted, means ' a goldsmith,'[1] and must not be confounded with *akshapatalika*, ' a keeper of records '

Of the localities mentioned in this inscription, Kaliṅganagara (l 1) is the present Mukhaliṅgam,[2] and Urāmalla, where the donee resided (l 12), is Urlām[3] where the copper-plates were obtained　In the absence of local maps, I am unable to identify the village granted, Hoṇḍevaka (l 8), and another village, Hattaravanna, which seems to be referred to in the description of the boundaries of the former (l 16)　The district of Krōshtuka-vartaṇī (l 8) occurs also in the Chicacole plates of Dēvēndravarman[4]

TEXT.[5]

First Plate , Second Side

1　श्री॑ स्वस्ति [।*] चर्व्वे॑न्तुसुखरसमणीयादिजयकलिङ्ग नगराच्वकलभुवननिर्म्माणैक-

2　स्त्रधारस्य भगवतो 'गोकर्णुस्वामिनचरणकमलयुगलप्रणामादपगत-

3　कलिकलङ्की विनयनयसम्पदासाधार: स्वासिधारापरिच्छन्नाधिग-

4　तसकलकलिङ्गाधिराज्यश्चतुरुदधितरङ्गमेखलावनितलप्रवि-

5　ततामलयथा(:)　अनेकासमरसंघीभजनितजयशब्दो[6]　गाङ्गा-

6　मलकुलप्रतिष्ठ: प्रतापासिमयानमितसमस्तसामन्तचूडा-

Second Plate , First Side

7　मणिप्रभामञ्जरीपुञ्जरञ्जितचरणो मातापितृपादानुध्यात: परम-

8　माहेश्वर: श्रीसत्याश्रयी वज्रिवर्म्मा (।) क्रोष्टुकवर्त्तन्यां होण्डेवकग्रामे स-

9　र्व्वसमवेतान्कुटुम्बिनस्समाज्ञापयति [।*] विदितमस्तु वो यथास्माभि[:][9]

10　वज्रिग्रामेयद्वारिदासकाद्यात्क्रीला द्वार्द्दलस्य भूम्छेदीत्यार्चन्द्राक्क-

11　प्रतिष्ठसमधारपूर्व्वा सर्व्वकरै: परिच्छद्य मातापित्रोरात्मनश्च पुण्याभिवृद्धये[10]

12　उरासन्निवासिने वत्ससगोत्राय वाजसनेयसब्रह्मचारिणे ज[य]-

Second Plate ; Second Side.

13　धर्म्मणे काच्त्तिदाक्षायाष्टम्यासुदकपूर्व्वं संप्रत्ता [।*] तद्विदित्वा स्वभूमिमनुपाल-

14　यता न केनचित्परिवाधा[11] कार्य्येति । सीमाच्छिप्रानि चाच्च [।*]
　　पूर्व्वेण वल्लीकस्तत:

[1] Cf. ' *agasāli, agasālavāḍu* or *agasālevāḍu*, a goldsmith,' in Brown's *Telugu-English Dictionary*.

[2] See above, Vol. IV, p 187 ff

[3] This identification was suggested in the Madras Epigraphical Report for 1920, p 96.

[4] Above, Vol. III, p 131

[5] From ink-impressions supplied by Rao Bahadur H Krishna Sastri.

[6] Expressed by a symbol.

[7] Read गोकर्णु॑

[8] Read °दम्पोश॑.

[10] Read °इस्य.

[9] Read यथास्माभिरक्षि॑

[11] Read °वाधा.

111 a

111 b

15 चेचपाली ततो घोषणवाप्या[:*] पश्चिमपाली ततः पुनरपि चेच-
पाली [।*]

16 दचिणेन उत्तरवप्रसीसान्तिका एव¹ [।*] पश्चिमेन चेचपाली ततो
वल्मीकः²

17 ततः कृतृमा³ पाषाणपङ्क्तिः [।*] उत्तरेणाधि चेचपाली ततो वल्मीकः
पुनर्व्वल्मीकः²

18 ततो⁴ पूर्व्ववल्मीकमनुमासेति । भविष्यद्राजभिश्चायन्दानधर्म्मोनुपालनीयः [।*]

Third Plate, First Side.

19 तथा च व्यासगीताः [।*] बहुभिर्व्वसुधा दत्ता बहुभिश्चानुपालिता [।*]
यस्य यस्य

20 यदा भूमिस्तस्य तस्य तदा फलं [॥ १*] स्वदत्ताम्परदत्तां वा यथाद्रच
युधिष्ठिर [।*] सर्व्वॉ⁵

21 सर्व्विमतां श्रेष्ठ दानाच्छ्रेयोनुपालनं [॥ २*] षष्टिं वर्षसहस्राणि मोदते दिवि

22 भूमिदः [।*] आच्छेत्ता चानुमन्ता च तान्येव नरके वसेदिति । [३*]
प्रवर्द्धमानविजय-

23 राज्यसंवत्सरा धम्मीति: ८० वार्त्तिकदिन ८ ॥ एदं विनयचन्द्रेण भानु-

24 चन्द्रस्य सूनुना [।*] श्रासनं राजसिंहस्य⁶ लिखितं स्वसुखाम्वदा ॥ [४*]

Third Plate, Second Side.

25 सर्व्वल्लायामनिक्षेपनिव्विष्टरातिसष्टते:⁷ [।*]

26 श्रीमतोप्रतिघाम्नस्य रणभीतस्य श्रासनम् ॥

TRANSLATION.

(Line 1.) Om. Hail! From Kaliṅganagara, (the city) of victory. which is pleasant (on account of the simultaneous presence) of the comforts of all seasons, the glorious Mahārāja Hastivarman, a fervent worshipper of Maheśvara, who meditates on the feet of (his) mother and father, ...⁸ commands (as follows) the ryots, accompanied by all (others), at the village of Hondevaka in (the district of) Krōshtuka-vartanī.

(L 9.) 'Be it known to you that We have purchased two and a half ploughs (hala) of land in this village from the *Agrahārikas*,⁹ have constituted (this land a separate) section.

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¹ Read सौसान्तिकेव.
² Read कृत्रिमा.
⁵ Read सर्व्वॉ
⁷ Read °सष्टते:
⁸ The epithets omitted here will be found translated above, Vol. III, p 120.
⁹ I.e. the residents of the *agrahāra*.

² Read वल्मीकस्तात.
⁴ Read कष्टात..
⁶ Read सिंहस्य

have made (it) an *agrahāra* which is to last as long as the moon and the sun, have exempted (it) from all taxes, and that, for the sake of the increase of the religious merit of (Our) mother and father and of Ourself, on the eighth (tithi) of the dark (fortnight) of Kārttika, with libations of water, We have given it to Jayaśarman, who resides at Urāmalla, belongs to the Vatsa *gōtra*, (and) studies the Vājasanēya (*śākhā*). Knowing this, nobody should cause obstruction to (the new owners) while they are preserving their own land.'[1]

(L 14) And the marks of the boundaries of this (land are) In the east, an anthill ; then the bank (*pāli*) of a field , then the western bank of the *Ghōshana* tank , and then again the bank of a field. In the south, only the boundary of Hattaravanna. In the west, the bank of a field , then an anthill ; then an artificial row of stones And in the north, the bank of a field , then an anthill ; again an anthill ; then (the boundary) reaches the anthill in the east.

(L 18) And future kings should preserve this meritorious gift. There are also the following (verses) sung by Vyāsa.

[Lines 19-22 contain three of the customary Slōkas]

(L 22) Eighty—(in figures) 80—years of the reign of increasing victory, the day 8 of Kārttika

(Verse 4) At the command of his (the king's) own mouth, this edict of Rājasimha has been written by Vinayachandra, son of Bhānuchandra

(V 5) (This is) an edict of the glorious Ranabhīta, whose orders are irresistible, (and) who has crushed the collection of (his) enemies by the strokes of the point of (his) scimitar.

No 20—IPUR PLATES OF GOVINDAVARMAN'S SON MADHAVAVARMAN.

BY PROFESSOR E HULTZSCH, PH D , HALLE (SAALE)

This is a set of three thin copper-plates in the possession of Brindavanam Gopalacharlu at the village of Īpūr in the Tenāli Tāluk of the Guṇṭūr District, which was brought to the notice of Rao Bahadur H Krishna Sastri by Mr A Rangasvami Sarasvati The plates measure 6¾ inches in breadth and 1¾ inches in height The outer faces of the first and last plates have been left blank, while the middle one bears writing on both sides The margins of the plates are not raised into rims, but the writing is in good preservation The plates are strung on a copper ring, which is 3" in diameter and is passed through a hole on the left side of the writing The two ends of the ring are secured in the base of a circular seal, which measures 1¼" in diameter and is somewhat worn. It is divided by a cross-line into two sections The lower section bears, in relief, the legend श्रीमाधववर्मं in two lines. Above the line seems to be a figure of Lakshmī or a Svastika on a pedestal, flanked by two lamp-stands and surmounted by the sun (?) and the crescent of the moon The weight of the plates, with ring and seal, is 30 tolas

The alphabet is of an earlier southern type than that of the two other published grants of the Vishnukundin family[2] The secondary forms of *i* and *i* are not always clearly distin-

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[1] Cf the corresponding portion of the Achyutapuram plates, above, Vol. III, p 129
[2] These are the Parvatipuram plates of Indravarman, above, Vol. XII, p. 133, and the Chikkulla plate Vikramendravarman II, Vol IV, p 133
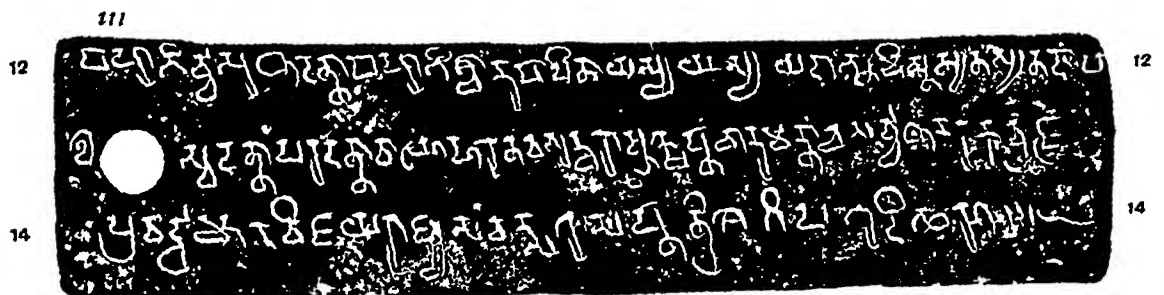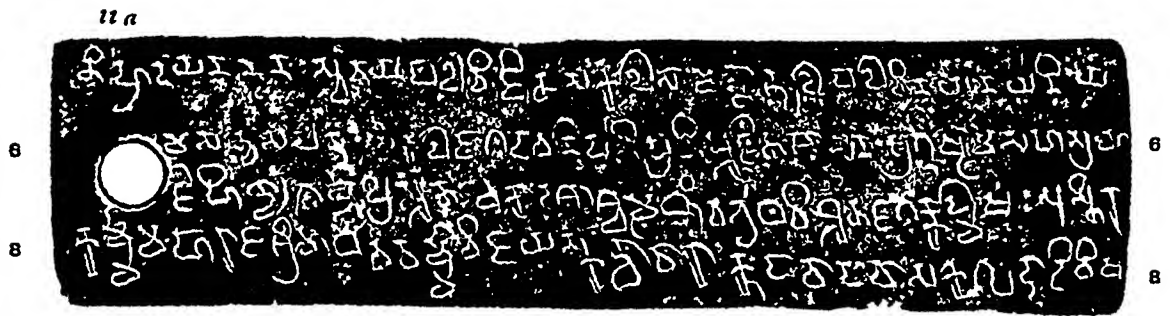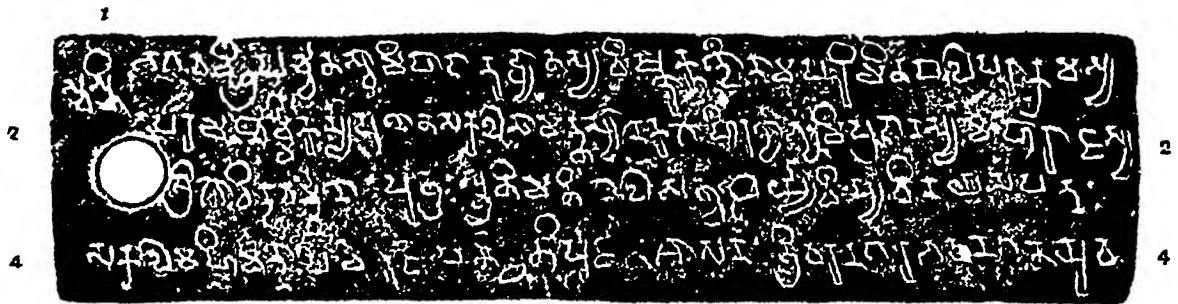
Seal
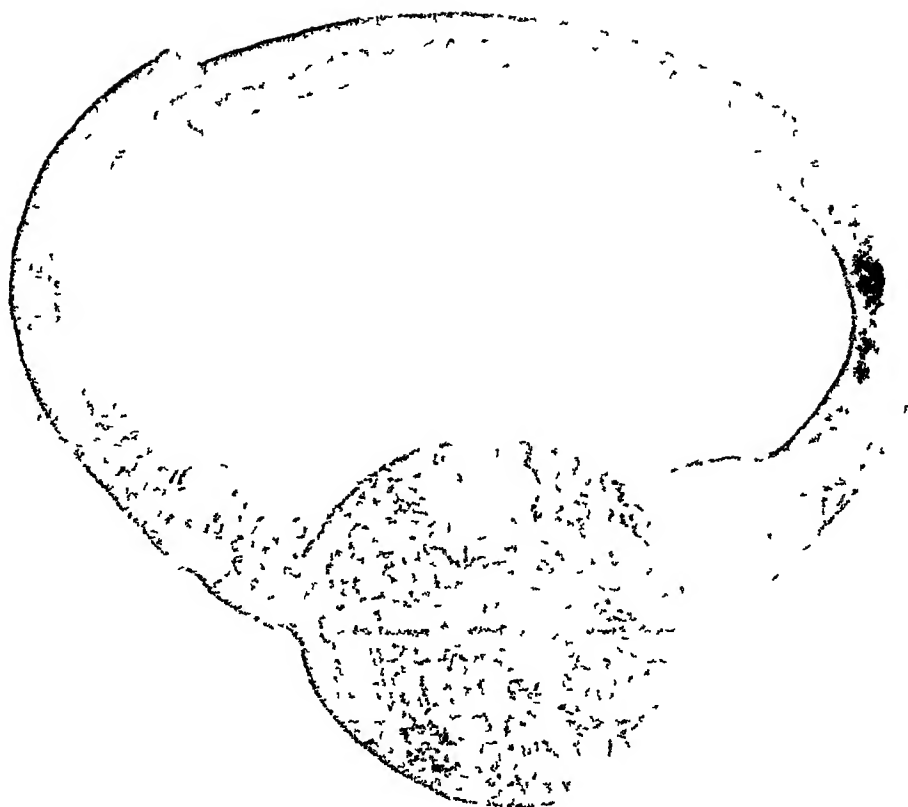
FULL SIZE

guished, in °*hundinām=* (l. 1) *i* looks like *ī*, and in *bhagavach-Chhrīparvvata-* (l. 1), *śrī-Govinda°* (l. 3), and *-mahī-* (l. 4), *ī* looks like *i*, *t* is distinguished from *n* by a loop on the left but in *-janīn=* (l. 9) the second *n* has a loop, and in *-jagat-kalmashah* (l. 7) and *-samvatsarē* (l. 14) the *t* has no loop. Final forms of *m* and *t* occur in *-arītham* (l. 10), *vasundharām* and *vrajēt* (l. 13) The numerical symbols 5, 7, and 10 are used in the date (l. 14)

The language is Sanskrit prose (with two verses quoted in l. 12 f), but the abbreviation *gi* (l. 14) presupposes the Prākrit word *gimha* (= *grīshma* in Sansk. t) The incorrect form *saptātrisē*, (for *saptatrimśē*, l. 14) seems also to be due to Prākrit influence Palatal *ñ* is expressed by lingual *n* in *Manchyanna-* (l. 11) Consonants are doubled after *r* throughout, and *dh* before *y* in *-ānuddhyātasya* (l. 1), while *tva* represents *tta* in *-satva-* (ll. 3, 6) As the notes on the text will show, the rules of *sandhi* are frequently disregarded

The inscription records the grant of the village of Vilembali in the Guddādi-vishaya (l. 8 f) to the Brāhmana Agniśarman. The grantor was the Mahārāja Mādhavavarman (l. 8), son of the Mahārāja Govindavarman (l. 3), who was a worshipper of the temple at Śrīparvati and belonged to the family of the Vishnukundins (l. 1) Mādhavavarman issued his order to the villagers from his camp at Kudāvāda (l. 8) and seems to have resided at Trivaranagara (l. 4) The executor (*ājñā*) of the grant was (the king's) ' dear son,' Mañchyanna-bhattāraka (l. 11) Its date was the 15th day of the 7th fortnight of the hot season in the thirty-seventh year of the reign (l. 14)

In consideration of the comparatively early type of the alphabet of this inscription, I feel tempted to identify Mādhavavarman with a king of the same name, who is known to have been the grandfather of the grantor of the Rāmatīrtham plates, and the great-grandfather of the grantor of the Chikkulla plates [1] For easy reference, I subjoin a tabular statement

Ipūr plates	*Rāmatīrtham plates.*	*Chikkulla plates*
Govindavarman		
|		
Mādhavavarman (year 37)	Mādhavavarman	Mādhavavarman
	|	|
	Vikramēndra	Vikramēndravarman I
	|	|
	Indravarman (year 27)	Indrabhattārakavarman
		|
		Vikramēndravarman II (year 10)

Of the localities mentioned in this inscription, Śrīparvata (l. 1) is perhaps identical with Śrīśailam in the Karnūl District [2] Whether the Guddādi-vishaya (l. 8 f) has anything to do with the Guddavādi-vishaya to which Drākshārāma and Chellūr in the Godāvari District belonged,[3] I am unable to say, nor can I identify Vilembali (l. 9), Kudavāda (l. 8), and Trivaranagara (l. 4), which can hardly be identical with the distant Tripuri (Tewar)

[1] See my remarks above, Vol. XII, p 133, and cf the Madras Epigraphical Report for 1920, p 95,

[2] See above, Vol IV, p 195

[3] See above, Vol. IV, p. 83, *Ind Ant*, Vol XIV, p 53, text l 77, Vol XIX, p 424

TEXT[1]

First Plate , Second Side

1 स्वस्ति [।*] भगवच्छ्रोपर्व्वतस्वामिपादानुध्यातस्य विष्णुकुण्डिनामसपरिमितबल-
पराक्रमस्य

2 परमधार्म्मिकस्य प्रणतसकलसामन्तस्यानेकगोहिरण्यभूमिप्रदानस्य महाराजस्य

3 श्रीगोविन्दवर्म्मणः पुत्रः स्मृतिमतिबलसत्त्वधैर्य्यवोर्य्यविनयसंपन्नः[2]

4 सकलमच्छीमण्ड[ल]म[नु]जपति[प्र]तिपूजितशासनः[3] निवरनगरभवनगतयुव-

Second Plate , First Side

5 तिहृदयनन्दनः 'स्व[न]यवलंविजितसकलसामन्तातुलबलविनयनयनिय-

6 मसत्त्वमपन्नः[5] सकलजगद्वनिपतिप्रतिपूजितशासनः[6] अनिष्टोमसइस्या-

7 जो चि[र*]ङ्गगर्भंप्रसूतः[7] एकादशाश्वमेधावभृथविभूतवगल्लक्षः[8] सुस्थिर-[8]

8 कर्म्मा[ा] महाराजश्रीसाधववर्म्मा विजयस्कन्धावारा[त्*] कुडावाडवासक-[9]
गुद्दादिविष-

Second Plate , Second Side.

9 ये विलिम्बलियासजनान्सव्वानिवस[ा*]ज्ञापयति यथा[10] अस्मे वलसगोत्राय
ब्राह्मणा-

10 य[11] अग्निशर्म्मणे अस्मद्वंशविभूत्यर्थम्[12] सर्व्वंपरिहारेण दत्तवानस्मि [।*]
तदवगम्य सर्व्वं-

11 राजपुरुषैः परिच्छेव्यः पालयितव्यश्च [।*] अस्याज्ञा प्रियपुत्रः[13] मण्चरण्-
मट्टारकः [।*]

Third Plate , First Side.

12 बडुभिर्व्वसुधा दत्ता बडुभिश्चानुपालिता [।*] यस्य यस्य यदा भूमिस्तस्य तस्य
तदा फ-

13 ल[म् ॥*] स्वदत्तां परदत्तां वा यो. ऐति वसुन्धराम् [।*] श्वाचेषा
चानुमन्ता च सर्व्वथा नरक¹ ब्रजेत् [॥*]

14 प्रवर्द्धमानविजयराज्यसंवत्सरे समाचिमे² गि प ७ दि १० ४ ॥

TRANSLATION.

(Line 1) Hail! The son of the glorious Mahārāja Govindavarman, who meditated on the feet of the holy lord of Śrīparvata; (who belonged to the family) of the Vishnukundins; whose power and valour were immeasurable, who was most religious, to whom all vassals were bowing, (and) who (performed) many gifts of cows, gold, and land;

(L 3) the glorious Mahārāja Mādhavavarman, who is endowed with (knowledge of) the law, intelligence, power, honesty, firmness, valour, and modesty, whose edicts are worshipped by all rulers of men on the circle of the earth, who delights the hearts of the young women standing on (the top of) the palaces of Trivaranagara; who has subdued all vassals by the power of his own arm, who is endowed with unequalled power, modesty, policy, self-restraint, and honesty, whose edicts are worshipped by the rulers of the earth in the whole world[3], who has performed thousands of *Agnishtoma* sacrifices, who is a producer of (1 e who has performed *Hiranyagarbhas*[4], who has removed the stains of the world by bathing at the end of eleven *Aśvamēdhas*[5], (and) whose religious rites are everlasting,

(L 8) from (his) camp of victory, pitched at Kudāvāda, commands as follows all men at the village of Vilembali in the district (*vishaya*) of Guddādi.

(L 9) 'For the sake of the prosperity of Our family, I have given (this village), with all exemptions, to this[6] Brāhmana Agniśarman of the Vatsa *gōtra*. Knowing this, all royal officers should exempt and preserve it'

(L 11) The executor (*ājñā*) of this (grant was the king's) dear son, Mañchyanna-bhattāraka.

[Line 12 f contain two of the customary Ślōkas]

(L 14) In the thirty-seventh year of the reign of increasing victory, the 15th day of the 7th fortnight of the hot season.[7]

No 21.—IPUR PLATES OF MADHAVAVARMAN II.

By Professor E Hultzsch, Ph D, Halle (Saale)

This is another set of three thin copper-plates without rims, which belongs to the same owner as the preceding one (above, No 20) The plates measure 7 inches in breadth and 1½ inch in height and have four inscribed faces, the outer sides of the first and last plates having been left blank. The writing is much injured, especially on the two last faces. The plates are strung on a ring, which is about 3" in diameter, and the ends of which are secured in the base of

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¹ Read नरक   ² Read समनिमे

³ The two last epithets are nearly identical with two others applied to the king before in line 3 f.

⁴ *Hiranyagarbha* is the name of the fifth of the sixteen *Mahādānas* Cf *anēka-Hiranyagarbbh-ōdbhav-ōdbhavasya* in the Mattepād plates of Dāmōdaravarman (above, No 18), text 1 2 f, and *apramēya-Hiranyagarbha-prasavēna* in the Goranṭla plates of Attivarman *Ind Ant*, Vol IX, p 102, text 1 3

⁵ The same epithet occurs (with the various reading *avadhauta* for *vidhūta*) in the Rāmatīrtham plates, l. 3 f., and in the Chikkulla plates, 1 2 f

⁶ Cf above, Vol IX, p 59, note 6.

⁷ With *gi pa 7* cf. *gimhā pakho chhaṭho 6* in the Mayidavōlu plates (above, Vol VI, p 88); [*g*]*imha-pakhe pachame 5* at Kārlē (Vol VII, p 61), the following dates of four Nāsik inscriptions (above, Vol VIII) *gimha-pakhe pachame 5* (p, 59), *gimhāna pakhe bitiye 2* (p 60), *gi pa 2* (p 65); *mha-pakhe chothe 4* (p. 88) and *gihma pakkam pidamam* in a Malavalli inscription (Vol X, Appendix, p 189, No 1195).

a circular, much worn seal, which is turned towards one side   The seal is divided by a cross-line into two sections   In the lower section the legend श्रीमाघव[र्म्म], in two lines, is very faintly visible, while the symbols in the upper section cannot be made out   The weight of the plates, with ring and seal, is 30 tolas

The alphabet reminds us of that of the British Museum plates of Chārudēvī (above, Vol. VIII, p 143)   The *Upadhmānīya* occurs in lines 12 and 16   The numerical symbols 7 (thrice) and [40] are used in the date (l 13)

The language is Sanskrit prose (with two verses quoted in ll 14-16), but the abbreviation *vā* (l 13) presupposes the Prākrit form *tāsa* (=*tarsha* in Sanskrit)   Consonants are doubled after *r* throughout, *t* before *r* in *kshattriyā°* (l 3 f) and -*putthas*= (l 5), and *ah* before *y* in °*ddhyātō* (l 7),[1] while *tva* is employed for *tha* in -*satta*- (l 6)

The inscription records the grant of a village, the name of which is doubtful, by Mādhava-varman (II) (l 7), who resided at [Ama]rapura (l 1), ruled over the Trikūṭa and Malaya mountains (l 5), was a worshipper of the temple at Śrīparvata (l 6 f), and belonged to the family of the Vishṇukundins (ll 7, 13)   His father was Dēvavarman (l 5), and his grand-father the Mahārāja Mādhavavarman (I) (l 3 f)   As the alphabet of this inscription seems to be of an earlier type than that of the preceding one, and as grandsons are frequently named after their grandfather, I consider it not impossible that Mādhavavarman II was the grandfather of Gōvindavarman's son Mādhavavarman,[2] who would then have to be designated Mādhavavarman III.   The first figure of the year in the date portion of the subjoined inscription (l 13) is injured and uncertain

The localities mentioned in this inscription I am unable to identify, with the exception of Trikūṭa, a mountain on the Bombay side,[3] and Malaya, i e the Western Ghāts, both of which were at a safe distance from the dominions of Mādhavavarman II, although he professes to have ruled over them   For Śrīparvata=Śrīśailam see above, Vol IV, p 195

TEXT[4]

First Plate , Second Side

1 स्वस्ति [।*] [अम]रपुरादिकाद्राश्वमेधावभृथावधूतजगळ्कल्म[ष]-

2 स्वामिनेष्टोमसचयाजिनोनेकरामन्तमकुटकूटम-

3 णिखचितचरणयुगलकमलस्य[5] महाराजस्य श्रीमा-

4 धवर्म्मणः प्रियनप्ता चत्रियावस्कन्द[वर्त्ति]ताप्रतिमवि-

Second Plate , First Side

5 [स्या]तपराक्रमस्य श्रीदेववर्म्मणः प्रियपुत्रस्त्रिकूटमलयाधिपति-

6 नयविनयसत्त्वसंपन्नो[6] भगवच्छ्रीपर्व्वतस्वामिपादानु-

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[1] But not in -*srādhyāya* (l 8) and *diyāuō°* (l 12).

[2] See above, l.u 20

[3] See above, Vol XI, p 220, and cr Vol. IX, p 269.

[4] From ink impressions supplied by Rao Bahadur H Krishna Sastri

[5] Read °चरणयुगलकमलस्य

[6] Lead °सत्त्व°.
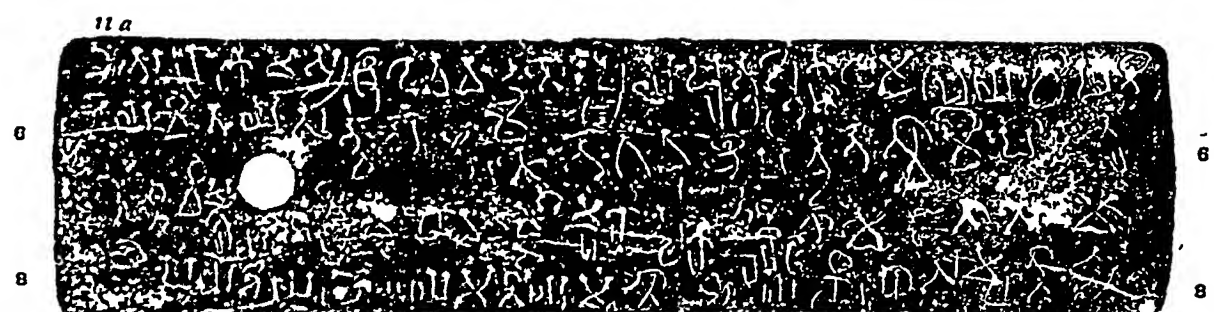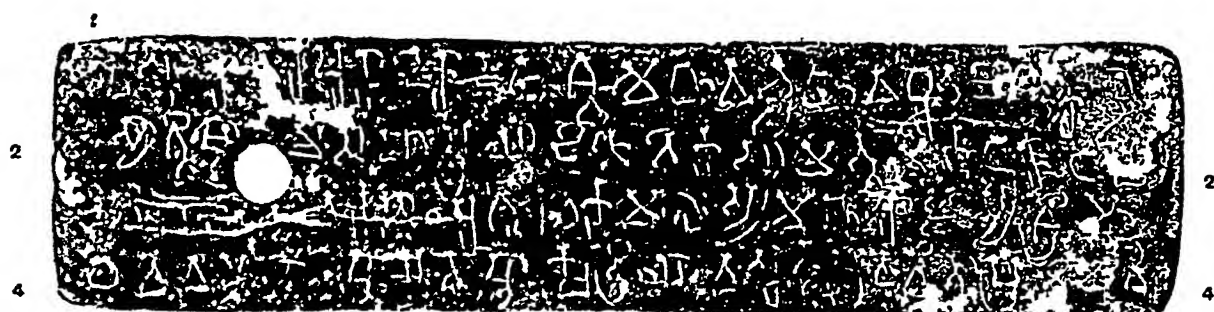
Seal
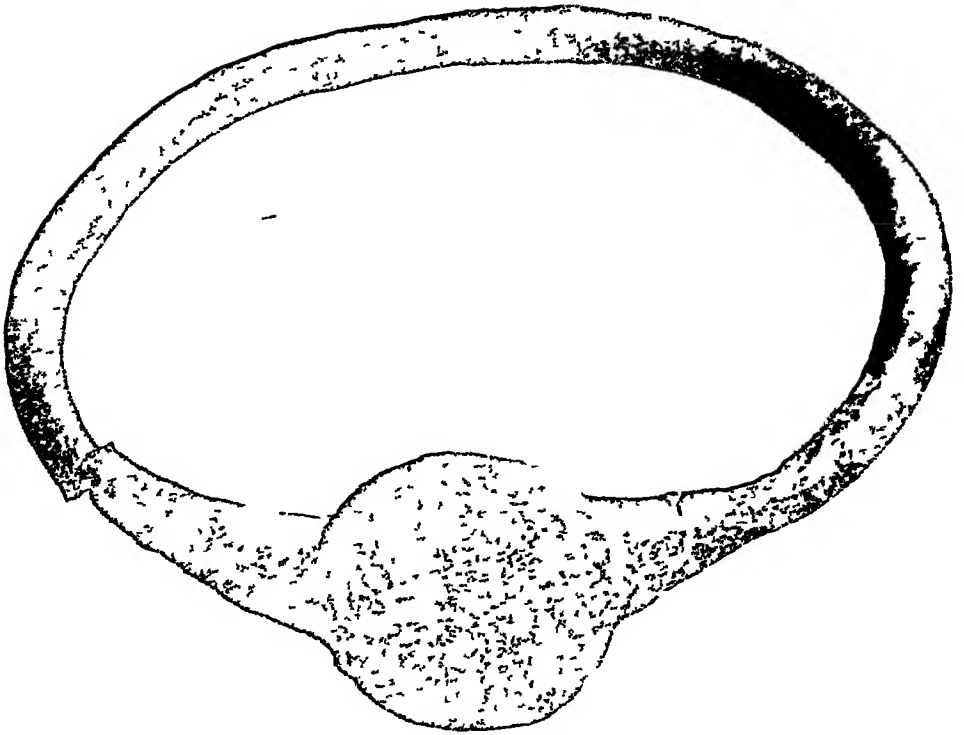
7 व्द्यातो विष्णु — — —¹ श्री[म]ध[वव]र्मा सुरो-क-किग्रामे जनानि[व]मा-

8 ज्ञापयति यथा ॥ यमनियमस्वाध्यायक्रियासम्पन्नाभ्या-

Second Plate , Second Side.

9 . . . . अग्निशर्मेन्द्र[यर्मा]भ्य[र]-

10 मा . . . . [कन्कि]क-

11 ग्राम . . . .

12 — — जानपदे⨯परिहर्त्तव्य[:*] [प]रिहार[यितव्यञ्च] [।*] अस्य [ग्रास]-

Third Plate , First Side

13 [न]स्याज्ञा विष्णुकु[ब्वधि]र[ा]ज[ध्यानोदात्ता] ॥ सं [४०] ७ वा प ७
दि ७ ओं² ॥

14 बहुभिर्व्वसुधा दत्ता बहुभिश्चानुपालिता [।*] यस्य यस्य यदा भूमि-

15 [स्तस्य] तस्य तदा फल[म्] ॥ स्वदत्तां परदत्तां वा यो हरेत वसुन्धराम् ।]

16 [गवां] ग्रतसहस्रस्य [हन्तु]⨯पिबति किल्बिष[मिति ॥]

TRANSLATION.

(Line 1) Hail! From [Ama]rapura, the dear grandson of the glorious Mahārāja Mādhavavarman, who had removed the stains of the world by bathing at the end of eleven *Asvamēdhas*, who had performed thousands of *Agnishtōma* sacrifices³ (and) whose pair of lotus-feet was studded with the jewels on the top of the diadems of many (bowing) vassals,

(L 4) the dear son of glorious Dēvavarman, who displayed matchless, well-known valour in attacking warriors,

(L 5.) the glorious Mādhavavarman, the lord of the Trikūta and Malaya (mountains), who is endowed with policy, modesty, and honesty, who meditates on the feet of the holy lord of Sriparvata, (and who belongs to the family) of the Vishnu[kundins], commands as follows the men at the village of . . . . .

[Line 8 f seems to refer to two donees, Agnisarman and Indrasarman]

(L 12) The command (*ājñā*) of this edict⁴ was ennobled by the meditation (?) of the overlord of the Vishnukundins.

(L 13) The year [4] 7, the 7th day of the 7th fortnight of the rainy season⁵ *Ōm*.

[Lines 14-16 contain two of the customary Slōkas]

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¹ Restore perhaps विष्णुकुण्डिनः.   ² Expressed by a symbol.

³ These two epithets occur also in line 6 f of the other four plates (above No. 20).

⁴ Cf *asya śōranasy-ājñaptih* , *South-Ind. Inscr* , Vol I, p 57, text 1 113 f

⁵ With *vā pa 7* cf *āsa 6* in the Hirahadagalli plates (above, Vol I, p 7), *varsha-pakshē chaturtthē* (Vol III, p. 262), *varshā-pakshah ashtamah* (*Ind Ant*, Vol VII, p. 37), *rāsā pakham 8* in two inscriptions at Jaggayya-pēta (ASSI, Vol I, p 110), *vā pa 4* at Karlē (above, Vol VII, p 64), *rāsa pakhe 2* and *vāsīsa pakhe 4* at Nāsik (Vol. VIII, pp 71, 73.)

3 A

No 22—REVISED TEXT AND TRANSLATION OF TWO OF THE KURAM PLATES.

By Professor E Hultzsch, Ph D, Halle

Some time after I had published the Kūram copper-plates of the Pallava king Paramē-śvaravarman I,[1] the late Professor Kielhorn recognised that plates III and IV of that inscription in which I had noticed only two verses are all in poetry I now reprint the very corrupt text of this portion of the inscription (ll 19-19), arranging it in verse lines, correcting the writer's mistakes as far as I am able to do this, in notes and adding a fresh translation Rao Bahadur Krishna Sastri was good enough to contribute to this article a few additional conjectures, viz. °चुदसि, verse 12 चुद्मटे or उत्तमटे, v 14 चगमसर°, v 15, रतवान्, v 21, मट, v 23.

The subjoined passage consists of 22 verses (5-26). The relative pronouns in verses 5 6 21, and 26 refer to the name of the donor Paramēśvaravarmmā, l 19) at the end of the preceding prose passage. Verses 8-21 form one long relative sentence, describing the king's victory over the Chalukya king Vikramāditya I Verses 22-26 praise Paramēśvaravarman's state-elephant Arivārana, his charger Atisaya, his dagger, and his girdle

<div align="center">

TEXT.[2]

</div>

सछेन्द्रवर्माग: . . . . . . पुत्र[:] . . . . . परमेश्वरवर्मा

भरत इव सर्व्वदमन[:*] सगर इव क्षतासमञ्जमल्याग: [।*]

कर्णं इव पुक्तलागी य: प्रियक[र*]ब्यो ययातिरिव [॥ ५ ॥*]

   (a) Metre of verses 5-9 · Āryā (30+27 mātrās).

अनुपनतार्था राज्ञा (a) यस्याश्रा सदलि सर्व्वदापीला (b) [।*]

चैव सुहृदाम्रयच्छति सुखमोभा (c) कर्णंपूरतया [॥ ६ ॥*]

   (a) Read राज्ञा   (b) Read °पीड: (c) Read °श्रीमी.

चतुर: कल्पविक्तासे नियतम् यश्चांदी (a) भवल्लनंगस्य [।*]

सुत्रागुणस्तु हृदये सुत्रागुण एव वनिता[ना]म् [॥ ७ ॥*]

   (a) Read नियतं चंडी

अगणितनरछयकरिकुलविमर्दं जनिनेन रेणुतुच्चिनेन [।*]

भारोपितगगिमण्डलसाद्भयसहकरविश्वे [॥ ८ ॥*]

यट्हरवगर्व्वितोये विकीर्णनिस्खिगत्विद्युदाभोगि (a) [।*]

प्रघरितकुब्धरजलदे विकालवर्षावतार इव [॥ ९ ॥*]

   (a) Read °निस्खिग्विदु (द्यु)°

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[1] South-Indian Inscriptions, Vol. I, pp. 144 ff.
[2] As the notes on the text are numerous and contain long Nāgarī passages, I am using for them ordinary type instead of the small and indistinct note-type, which, as I know from experience, is liable to breaking and dropping

ii a

34

36

Metre   Pragīti

38

40

नापरिसवनियांवन.

iv b

42
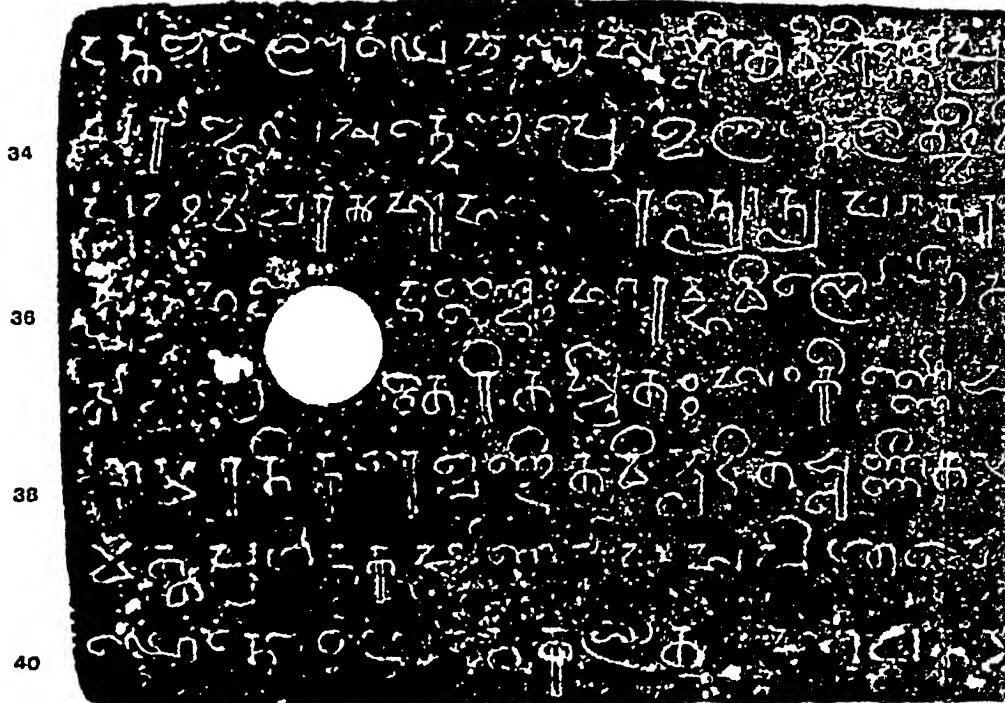
tisfy the metre
Āryāgīti.

44

[|| १८ ||*]

46

metre requirer

48

3 ∠ 2

तुंगतुरंगतरंगे प्रचर्व्वारिसिकरजनितविषमावर्त्तो (a) [।*]

अविरळमुदीर्ण्णशंखे विवृंभसागे समुद्र इव [॥ १० ॥*] (b)

(a) Read °वर्त्तं.   (b) Metre - Sugīti (32+27)

खङ्गलतावरणयुतौ सगरासननागतिलकपुन्नागघने [।*]

छत्तकलकलभद्दे कानन इव चण्डवेगपवनाकुलिते [॥ ११ ॥*] (a)

(a) Metre . Āryāgīti (32+32)

योधापुरोतधनुषु (a) व्यतिपतितपत्रिङ्खपवनफये (b) [।*]

प्रचरिततोमरशक्तिप्रासगदाकर्णयकप्पणचक्रे (c) [॥ १२ ॥*] (d)

(a) Read योधापूरितधनुषि.   (b) Read °पवनपथे.   (c) Read °कार्ंय°.   (d) Metre Pragīti (30+29).

अन्योन्यलीगरदनकुलीशस्थिरकिलितवदनमत्तगजवृन्दे (a) [।*]

अन्योन्समूर्द्धपातितखङ्गव्यतिपक्तुरगसादिगणे [॥ १३ ॥*] (b)

(a) Read अन्योन्यरदनकुलिशस्थिरकीलित°,   (b) Metre Gīti (30+30).

अस्त्रायस्त्रकचाकचिदगडीर्क्रियाप्रव्यंक्ताभटजने (a) [।*]

अन्योन्यसदृग्गणनपरिभवनीर्य्यातना (b) [॥ १४ ॥*]

(a) Read अस्त्रास्त्रकिचाकचिदगडर्ष्टिक्रियाप्रयुक्तभट or °प्रव्यक्तभटे   (b) Read °गणनापरिभवनियोवना. The remainder of this verse is left out by the writer

मृग्मदमिश्रोतथ्णितकुङ्कुमघनलिप्य[मा*]नभूमितले (a) [।*]

विर्द्दलितनिपतितवाङ्मीवाजं[घो]ङ्काण्डदन्तवल्लीचे (b) [॥ १५ ॥*] (c)

(a) Read मृगमदमिश्रित°.   (b) Read °लीचे   (c) Metre Lalitā (30+32).

स्यूद्गम[स्या]तविदीर्ण्णप्रज्ञवितविद्रुत[भूमित]तोभयपचे (a) [।*]

अन्योन्यजयपराजयसन्देहप्रेंखलग्नसच्छ्रीविद्दिते (b) [॥ १६ ॥*] (c)

(a) From [स्या]त to the end, this line is engraved on an erasure To satisfy the metre °प्रविस्तष्णात° might be read   (b) Read perhaps °विद्दिते   (c) Metre of verses 16-19 Āryāgīti.

रुधिरौघपालिकायीतपतितगजस्येणिष्ठ्ठविचरत्सुभटे (a) [।*]

अन्योन्यघातरन्ध्रानधि[ग]मलग्रक्रियायतस्थितयोध्दे (b) [॥ १७ ॥*]

(a) Read रुधिरौघपालिकायित° and °ष्ठ°   (b) Read °लग्नक्रियायित°.

अस्त्रीचतभुजदण्डैः (a) सारभविलोचिताचदष्टोष्ठपुटै[:*] (b) [।*]

राजन्ये[:*] क्षतकल्बे: नीच्चतिता[र्द्ध]च्चतैरितख्वित: (c) संकोच्च्ण च (d) [॥ १८ ॥*]

(a) Read अस्त्री.   (b) Read चरभ°   (c) Read °कृल्यनिंष्टर्तार्द्धचतंरितत्त्वात..   (d) The metre requires च to be cancelled.

स्रीयण्णंध्वजातपत्ते[:*] पतितगजश्च(a)सितचलितचामरनिकरे [।*]

ख्वण्डितविस्रदितचूर्ण्णितमकुटंगदहारकटक्कक्णर्ण्णाभरणे (b) [॥ १८ ॥*]

(a) Read °गजाश्च.   (b) Read °मकुटांगद°.

दधिरमधुपानसत्तप्रगीतकूष्माण्ड[राच्]सपिशाचे　[।*]

द[त्त]लयतुल्यकालप्रतिभयनीनृत्यंत्कवन्यत्रयोनौ (a)　[॥ २० ॥*] (b)

(a) Read °भयनत्यत्कवन्ग्रत्रयोनौ　(b) Metre Gīti

[योनै]कलाचसाधनमा[योध]नगिरिसि (a)　विक्रमादित्य[म् ।*]

कप्पटमात्रपरिच्छदम्(b)　एकाकिपलायितम् [क्षत](c)　[॥] [२१ ॥*] (d)

(a) Read °त्त्व°　(b) Read कर्पंट°　(c) Read °च्छदमेकाकिपनायित हतवान्.
(d) Metre Āryā

रत्नप्रभाखचितकाञ्चनशरिचन्न (a)

सान्वाछ्व(b)　नागमक्षिवारणनामधेय[म्*](c)　[।*]

नित्यानुबन्धमदनिजरमद्विनाथ (d)

साचादिव द्विपसद्वसक्तानियातम् (e)　[॥ २२ ॥*] (f)

(a) Read रव° and °यम　(b) Read सद्वाछ　(c) Read °मरिवारण°　(d) Read °निर्भरमद्विनाद्.
(e) Read °कृतानुवात्म्.　(f) Metre Vasantatilakā

त्रिदशपतितुरगस्येवमष्टमंगलयत्ने (a)

घरसद्वलसम् प्रव्यक्तकल्याणनार्तिं(b)　[।*]

तुरगमतिमयाख्यां(c)　रत्नपल्यायवन्तम्

शतमपि (d)　श्यलच्चैश्वामरच्छत्रकरण्यं[: ॥ २३ ॥*] (e)

(a) Read perhaps °तुरगस्यष्टमांगल्ययात　(b) Read perhaps वरसनमस्कत्म्व्यक्त°.　(c) Read °थाख्यं
रत्नपल्यायवन्त　(d) Read युतमपि　(e) Metre Mālinī

समरपरिश्रमस्य सद्ऌव्यमहप्पलसलयुजवोकम् (a)　[।*]

रत्ननखरमनुपम (b)　माणिक्यमरकतनिवेशमण्डनम् [॥ २४ ॥*] (c)

(a) Read °रमछद्य लत्तसमद्वीयलमालायुजमेकम　(b) Read रव° and °मनुपम च　(c) Metre Gīti.

स्वच्छगुण गुणन्तकटिसुत्वतम् उदीर्णम् मणिप्रभम् (a)　[।*]

भासुरकिरणमालिकोटमाणिक्समनघमविद्युतम् (b)　[॥ २५ ॥*] (c)

(a) Read गुणवरकटिसुत्वसुदीर्णनमणिप्रभम्.　(b) Read °कोटिमाणिक्यसमघंमभियुतम्　(c) Metre ?

मनसि भयवि[— — —*]र्प्यंयत्यार्थिवाना- (a)

न्दिग्धि दिग्धि चटितनिर्वो यग्यम् पुष्पमाला[म्*] (b)　[।*]

इदम् महरदग्धेप (c)　सत्तया यत्कलच्म्या

सह वपुषी (d)　विश्वेपालंकृति दौरज्ञल्वा [॥ २६ ॥*] (e)

(a) Read perhaps भयविपादावर्प°　(b) Read चलितारिदाँ यग्गा×्चु°　(c) Read इयमवरदग्धेप.
(d) Read वपुषि　(e) Metre Mālinī.

TRANSLATION.[1]

Mahēndravarman's . . . . . son (was) . . . . . Paramēśvaravarman,

(Verse 5.) who was a subduer of all (enemies), just as Bharata (bore the surname) Sarvadamana[2], who avoided improper conduct (asamañjasa), just as Sagara banished (his son) Asamañjasa[3], who possessed a strong body (anga), just as Karṇa (was the king) of the rich Angas, who was fond of poems (kāvya), just as Yayāti was fond of (his father-in-law) Kāvya (Uśanas);

(Verse 6) whose command always becomes a chaplet on the heads of (i e is received with respect by) independent kings, (but) also confers splendour on the faces of (i e fills with joy) (his) friends by reaching (their) ears, [just as an ear-ring (karṇapūra) becomes an ornament to the face],

(Verse 7) (who) is clever in the sport of fine arts (kalā) (and) constantly passionate in ove,[4] and who avoids vice (mukt-āguna) in (his) heart, (but) also (becomes) a pearl-necklace (muktā-guna) on the breast of (his) wives,

(Verse 21.) who put to flight Vikramāditya,—whose army (had consisted) of several lakhs, (but who was left) quite alone (and) covered only by a rag,—at the head of a battle,

(Verse 8) in which the disk of the sun was made to assume the likeness of the circle of the moon through the mist of dust produced by the stamping of countless troops of men, horses, and elephants,

(Verse 9) which inspired terror through the thunderlike sound of kettle-drums; in which unsheathed swords (reminded of) the curves of flashes of lightning, in which elephants were advancing like clouds, (and which therefore) resembled an unseasonable breaking of the monsoon,

(Verse 10) in which tall steeds (looked like) high waves, in which elephants tore up the ground on their path, just as sea monsters produce whirlpools in diving up, in which conches were incessantly blown (or cast up), (and which therefore) resembled the gaping ocean,

(Verse 11) which contained curved swords and shields (āvarana), (resembling) rhinoceroses, creepers, and varana (trees), which teemed with heroes holding bows and (riding) mighty elephants, (as if it were) covered with śara (grass) and with asana, nāga, tilaka, and punnāga (trees), in which confused noises were raised; (and which therefore) resembled a forest agitated by a violent wind,

(Verse 12) in which bows were bent by warriors, in which the air was obstructed by arrows flying past each other, in which javelins, pikes, darts, clubs, lances, spears, and discuses were flying about,

(Verse 13) in which troops of mast elephants firmly impaled each other's faces with the thunderbolts of their tusks, in which squadrons of horsemen were connected by their swords that had struck each other's heads,

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[1] To make the construction clear, I had to place verse 21 before verse 8

[2] Cf Mahābhārata, I, 74, 8, VII, 68, 7, and Śakuntalā, ed. by Cappeller, p 93, l 2, p 95. l. 24; p. 97, l. 8; p 102, l. 21

[3] In the epic poems he is called Asamañja or Asamañjas.

[4] The poet seems to hint a comparison of the king to the moon, who is 'charming in the splendour of his digits (kalā),' and to Śiva, who 'was angry with the god of love.'

(Verse 14.) in which soldiers were engaged in fighting with sword against sword, pulling of hair against pulling of hair, and club against club; . . . . . considering each other as equal (or) despising (each other),

(Verse 15.) in which the ground (seemed to be) thickly smeared with saffron, as the blood (of the wounded) was mixed with the musk (anointing their bodies), in which (both) large armies had lost and dropped arms, necks, shanks, thigh-bones, and teeth,

(Verse 16) in which, during the encounter, both parties were broken, urged on, put to flight, and stretched on the ground, which was witnessed by the goddess of fortune sitting on the swing of doubt about mutual victory and defeat;

(Verse 17.) in which brave warriors were marching on the back of lines of fallen elephants forming a bridge over the flood of blood; in which soldiers stood rendered motionless, as their blows did not hit each other's weak parts;

(Verse 18 f) which was covered here and there with elephants which had fallen (simul-taneously with shattered banners and parasols), and whose respirations waved the mass of chowries and with dead (or) half-dead warriors who had done their duty, whose strong arms (still) raised the weapon, whose lips were bitten, and whose eyes were deep-red with fury, in which tiaras, armlets, necklaces, bracelets, and ear-rings were broken, crushed, and pulverized,

(Verse 20) in which Kūshmāndas, Rākshasas, and Piśāchas were singing aloud, as they were intoxicated by drinking the liquor of blood, (and) which contained hundreds of headless trunks dancing together in a fearful manner and beating the time (with their hands)

(Verse 22) Having caused to be accoutred the elephant named Arivārana,—whose golden howdah was studded with the splendour of jewels, the flow of whose rut was incessant, (and who therefore) resembled the king of mountains (Himālaya) himself, whose torrents never cease to flow,—followed by thousands of (other) elephants,

(Verse 23) also the excellent horse named Atiśaya,—who displayed the majestic stepping of the horse of the lord of gods (Indra); who manifested his noble breed by his active jump-ing; (and) who bore a saddle (set with) jewels,—accompanied by lakhs of (other) horses whose ears were surmounted by chowries;

(Verse 24) (and having put on) an unique and unequalled curved dagger (set with) jewels, which was fit for the fatigue of battle, attached to a string of matchless big stones, (and) ornamented by being inlaid with rubies and emeralds;

(Verse 25.) (and) a valuable, priceless, famous girdle (which was strung) on a soft string, which emitted the splendour of gems, and the ruby at the end of which (resembled) the bright sun;

(Verse 26) he (viz Parameśvaravarman) who had destroyed his enemies, inspiring with fear [and despair] the minds of princes, (and spreading) the flower-garland of (his) fame in all regions, carried all these (ornaments)[1] on (his) body that was highly adorned with heroic deeds, —along with the powerful goddess of fortune clinging (to him)

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[1] This seems to refer to verse 24r.

No 23—DHANAIDAHA COPPER-PLATE INSCRIPTION OF THE TIME OF KUMARAGUPTA I THE YEAR 113

By RADHAGOVINDA BASAK, M A, CALCUTTA.

This inscription, engraved on a thin copper-plate which now looks very much worn out and fragile was discovered about a decade and a half ago in a village called Dhanaidaha in the Natore Sub-division of the Rajshahi District in the Rajshahi Division of the Bengal Presidency. Babu Akshaya Kumara Maitraya, B L, Director of the Varendra Research Society of Rajshahi, obtained it from Maulvi Muhammad Ershed Ali Khan Choudhuri (now Khan Bahadur), and it is now deposited in the Museum of the Society along with the five copper-plate inscriptions[1] of the Gupta period recently discovered at Damodarpur in the District of Dinajpur. It was edited in 1909 by Mr R D. Banerji, then of the Calcutta Museum, in the *Journal of the Asiatic Society of Bengal* (Vol V, No 11, pp 159-61) Mr Banerji's decipherment of the inscription was not correct, and the text as prepared by him contained some mistakes. Mr Vincent Smith in his *Early History of India* (3rd Edition) has referred to this epigraph by the name of the Natore inscription in a foot-note at page 327, but he could not make out any material for the history of the period, probably because Mr Banerji's reading was unsatisfactory and because of his remarks that "the wording of the record is rather difficult to interpret," and that "no continued translation is possible of the text" While editing two of the Damodarpur inscriptions belonging to the same monarch's reign, I had to revise the reading of this inscription, and I re-edited it in the Bengali monthly, the *Sahitya* of Calcutta, in the Pausha issue, 1323 B S I now record the results of my decipherment in this Journal for the scrutiny of scholars Some of the chief mistakes in Mr Banerji's reading will be pointed out below in the foot-notes Other differences in our readings may be left to be found out by those of our readers who may care to do so

The inscription is a fragmentary one, consisting of 17 lines of writing incised in the early Gupta characters of the 5th century A D It is written on one side only of the plate, which is now very much corroded In length the full plate seems to have been almost twice the fragment now preserved, which measures 5¼"×5¼" Almost the whole of the proper right half of the plate is broken and lost together with the upper right and lower left corners From an examination of the portions of the writing preserved in lines 14-16, which form parts of the well-known imprecatory verses, it can be ascertained that about a dozen and a half letters are cut off from the proper right side of each of the lines This loss of almost half of the inscribed portion and the extremely blurred state of the letters preserved are the greatest obstacles in explaining the document But the five newly discovered Damodarpur copper-plates and the four Faridpur grants[2] have helped us much in deciding that the present plate also, like them, is not an ordinary royal land-grant, but is a sale-deed embodying the record of a purchase of land for the purpose of donation Mr Banerji states that the fragments of the proper upper right corner, which was broken in the exhibition grounds of the Calcutta Industrial Exhibition of 1906-7, contained the two letters *ma* and *ra*, which, he thinks, were evidently the second and third syllables of the name of the emperor Kumara-gupta The inscription is dated in 113, which must be referred to the Gupta era, and this evidently proves that it belonged to the time of the Gupta

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monarch Kumāra-gupta I　The language of the inscription is Sanskrit, and it is in prose throughout excepting in lines 14-16, which contain the three imprecatory verses　Mr Banerji's statement that "the bad state of preservation makes it very difficult to make any remarks on the orthography" cannot be upheld, for, the following points in respect of orthography may easily be observed :—

(1) as in the Dāmōdarpur copper-plates, the sign of the medial ā is attached by a hook-sign towards the bottom of the lower right of some of the letters, especially of kha, ga and na, e g khāsaka 1 5, Khādā(tā ?)pāra- 1 7, grām-āshṭa- 1 6, and guṇ-āguṇa- 1 13,

(2) the sign of dvagraha is not used, as in -vishayē=nivritta- l. 7;

(3) the letters ga, na, ta, ma, ya and va (and not sha, e g varsha- 1 15) are doubled with a preceding r, e g. vargga- 1 4, svarggē l. 15, utkīrnnaṁ 1 17, kīrtti 1 4, -śarmma ll 3 and 5, dharmma 1 8, -maryyādā- 1 7, and -pūrvva ll 2 and 16, sarvra l. 9,

(4) m has sometimes been joined with following pa and va, e g in svadattām-para-dattām=vā 1 14, and

(5) ka has been doubled with a following r, e.g in kkramēna(na) 1 8

The form of the initial vowels ā, i and u are seen in the following words respectively, āyuktaka 1 11, iha 1. 7, and utkīrnnaṁ l. 17.　The form of the letter mē in kkramēna(na) 1 8, sarvvam=ēva 1. 9, Stha(Sta)mbhēśvara l. 17, and -kulyavāpam=ēkaṁ 1 11, is to be noticed.　For a similar incision of mē, especially the ē mark in it, we may compare the words kāryam=ēshāṁ 1. 31 in Fleet's, C. I. I Vol III, No 1 and guhām=ētām 1 5 (ibid, No 6), and the word dōsha-grāmō 1 1 (wrongly read as dās-āgrēna by Mm H P Śāstri and Mr R. D. Banerji) of the Susunia Rock Inscription (above, Vol XIII, p 133)　In my paper on "The Five Damodarpur copper-plate inscriptions of the Gupta period," published in this Journal (vide Vol XV, Part III), I made a remark at the outset that those sale-deeds, which our present inscription resembles, "may be regarded as having roughly six different parts in the form in which they are drawn up"　The same remark holds good with regard to this inscription also　the first part ends with the word vijñāpitā 1 7, the second with dā[tum] 1 8, the third with tad=aradhritam=iti yatas 1 10, the fourth with ēkaṁ dattaṁ 1 11, the fifth with -Varāha-svāminō dattaṁ 1. 12, and the sixth with the rest of the grant

The contents of the inscription may be stated as follows :—In the year 113 G E (=432-33 A D), belonging evidently to the reign of Kumāra-gupta I, some one (very likely a royal officer, an āyuktaka) whose name seems to have ended in -vishnu (1 7) approached the village house-holders, the mahattaras and the ashta-kul-ādhikaranas and perhaps also the local government of the district and expressed to them his desire to purchase one kulyavāpa of cultivated land by paying the price at the usual rate prevalent in the vishaya of Khādā(tā ?)pāra　It seems that the applicant wanted to buy the land by destroying the nīvi dharma (the non-transferability of it), i e with the right of alienation　His prayer was granted and the purchased land was severed for him by proper measurement　He in turn seems to have made a donation of the same to a Sāmavēdin Brāhmaṇa (chhandōga 1 12) of the name of Varāha-svāmin　It seems very probable, though the mutilated condition of the plate does not permit us to be very confident on the point, that the Dhanāidaha plate contained a reference to the Puṇḍravardhana bhukti being under a governor appointed by the Gupta ruler (compare the Dāmōdarpur plates of the years 124 and 128 G E , belonging to the same monarch's reign) and that the vishaya of Khādā(tā ?)pāra was, like Kōtivarsha, one of the many districts of the same bhukti.　In the Khālimpur copper-plate[1] of Dharmapāla, King of Gauda, though of the 9th century A D., we have the names of two other vishayas, viz. Mahāntāprakāśa (1. 31) and Sthālikkata (1. 41), as being situated in the bhukti of Puṇḍravardhana

Dhanaidaha Copper-plate of the time of Kumāragupta I   the year 113

F W THOMAS

SCALE SIX-FIFTHS (ENLARGED)

WHITTINGHAM & GRIGGS COLL.

I edit the inscription from the original plate —

TEXT.

1 . . . . . mvatsara[1]-śat[ē] trayōdaś-ōtta[2]-

2 . . . . . . n=d[i]\vasa[3]-pūrvvāyām parama-daivata-para-[4]

3 . . . . . ā (?) kutu[mbi] . . brāhmana-Śivaśarmma-Nāgaśarm=ma-maha-[5]

4 . . . . . va-kīrtti-Kshēmadatta[6]-Gōshṭhaka - Varggapāla - Piṅgala - Śunkuka- Kāla-

5 . . . . . pa (?)-vishṇu - [Dēva]śarmma - Vishṇubhadra[7] - Khāsaka - Rāmaka- Gōpāla-

6 . . . . . sa (?) su (?) Śrībhadra-Sōmapāla-Rām-ādyāh (?) grām-āshla-kul= ādhikaraṇañ=cha

7 . . vishnunā (?) vijñāpitā iha[8] Khādā(tā ?)pāra-vishayē=nuvṛitta[9]= maryyādā-sthi[ti]-

8 . . . . . . nīvī-dharmma-kshayēṇa labhya[tē] [ta]d=arhatha mam[10]=ādy= ānēn=aiva kkramēna(pa) dā[tum]

9 . . . . samētya=ā(?,bhilutai(h ?) sarvvam=ēva * jñā(?)kara-prativēśi(?)= kutumbibhi=avasthāpya ka-

10 . . . . . * ri * kana * yad=itō * * [ta]d=avadhṛitam[11]=iti yatas= tath=īti pratipādya

11 . . . . vaka[12]-nalā[bhyā]m=apaviñchhya kshētra-kulyavāpam=ēkam dattam tataḥ āyuktaka-

12 . . * bhrā(?)tṛi - kaṭaka - vāstavya[13] - chhandōga - biāhmana - Varāha= svāminō dattam tad=dha-[va ?]

13 . . . . . . bhūmyā dā[n=ākshē]pō cha guṇ-āguṇam[14]=anuchintya śarīra= ka(kā)ñchanakasya chi-

14 . . . . ā [u]ktañ=cha bhagavatā Dvaipāyanēna Svadattām=para-dattām= vā

15 . . . . . [bhib] saha pachyatē [||*] Shashṭim[15] varsha-sahasrāni(ṇi) svarggē mōdati [bhū]midah [|*]

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[1] Read samvatsara-. [2] Read -ōttarā. [3] Read asyān=divasa-

[4] Read -paramabhaṭṭāraka. In the Dāmōdarpur plates also Kumāra-gupta I is styled parama daivata.

[5] Read, perhaps, mahattara-

[6] & [7] Mr Banerji reads Kshamavanta and Vishyabhadra.

[8] Mr Banerji reads Mahā-khushāpāra

[9] Mr Banerji reads nivatta instead of anuvṛitta

[10] Mr Banerji's reading "mātādya nanu vakkra lēna (?)" instead of our reading "mam=ādya=ānēn=aiva kkramēna(na)" and his remark on the palæography of his supposed la in his own reading lēna (?) is unwarranted

[11] Instead of avadhṛitam=iti yatas=tath=ēti Mr Banerji read dahyakam=iti yatas=t(y)ajati

[12] Read ashṭaka navaka-nalābhyām. The sense of the whole document depends on the correct reading of this line of the inscription, and Mr Banerji's reading gives no help His reading of the whole line is as follows — " . . . . vara nālaka sada (?) vi . chya . . . . kṛitja vasa-laka (?) datta tataḥ suyuktaka . "

[13] Mr Banerji reads vantēbhya (?) for vāstavya and chāndafa (?) for chhandōga.

[14] Mr Banerji reads śunu (?) gunam.

[15] Mr. Banerji reads śaṣṭi(n).

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16   . . . [Pū]rrva-dattāṁ dvijātibhyō yatnād=raksha Yudhishṭhira [|*]
          mahīṁ [mahī][matāñ=chhrēshṭha*]

17   . . . ya[m] su (?) Śrībhadrēna(na) utkīrṇnam Stha(Sta)mbhē-
          śvara[l]dāsē[na]   . . . .

TRANSLATION.

In the year one hundred exceeded by thirteen . . . . . . on this day (as above specified), [during the reign of] *parama-daivata parama-bhaṭṭāraka*, etc Kumāra-gupta . . . . . the ryots (of the village) . . . . . . the Brāhmaṇas Śiva-śarman, Nāgaśarman and the *Mahattaras*[2] [Dē?]vakīrtti, Kshēmadatta, Gōshthaka, Varggapāla, Piṅgala, Sunkuka, Kāla . . . . . , -vishṇu, Dēvaśarman, Vishṇubhadra, Khāsaka, Rāmaka Gōpāla,   . . su (?) Śrībhadra, Sōmapāla, Rāma and others, and the officer[3] in charge of eight *kulas* in the village were informed by (some officer whose name appears to have the ending Vishṇu l. 7) as follows —

" In this *vishaya* of Khāḍā(tā ?)pāra the established custom (regarding the sale of culti-vated land) prevalent . . . . . . to be had (at . . . . . such rate) by the nullification of the custom of permanent endowment[4] (*nīvī-dharma*) So deign to make a gift (of land) this day according to this method . . . . by the neighbouring house-holders who are obedient and who are (thus) addressed establishing   . . . . ."

Whereas it was so determined, and whereas this determination was accepted by the state-ment "be it so"—one *kulyavāpa*[5] of cultivated land was given to him, with its area severed[6] by the measurement of 8 × 9 reeds.

Then the same land was given to the *Chhandōga*[7] (Sāmavedin) Brāhmaṇa Varāha-svāmin, an inhabitant of the *kataka*[8] of . . . . , by this official[9] (*āyuktaka*)

So, considering the merit and demerit respectively of making a gift and confiscating (it), and (the unstability) of body and gold, (this gift is to be preserved) To the same effect has been stated thus by Bhagavān Dvaipāyana (Vyāsa) —

(1) Whoever confiscates land given by himself or by another becomes a worm in ordure and rots with his forefathers.

(2) Land has been given by many kings, such as Sagara and others the reward (of these grants) belongs to whosoever at any time possesses the earth.

(3) O Yudhishṭhira, best of land-lords, preserve with care land already given to the twice-born (Brāhmaṇas); for, the preservation of land-grants is more meritorious than the making of a grant. Engraved by su (?) Śrībhadra and (written) by Stambhēśvaradāsa.

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[1] Mr Bane-ji reads the name as *Sthalnēśvara*

[2] *Vide* my note on this word in Plate No 4 of the Dāmōdarpur collection, above, Vol. XV, p. 137.

[3] *Vide* my note on this word, *ibid*, p 137 Mr Banerji's explanation of this term as " a local officer (*kulādhikaraṇa*) who exercised authority over eight villages" does not seem to be correct. He was rather an officer in the village having supervising authority over eight *kulas* (for the technical meaning of which see Kullūka's commentary on *Manu*, VII, 119)

[4] *Vide* my note on the term *nīvī* in Plate No 1 of the Dāmōdarpur collection, above, Vol. XV, p. 131, n. 8, and *Indian Antiquary*, 1919, p 14.

[5] *Vide* my note on this word on p 132, above, Vol. XV.

[6] The word *apaviñchhya* occurs in the Paṇḍpur grants (*Indian Antiquary*, 1910) and in Dāmōdarpur plate No. 3, l. 10, p 138, above, Vol. XV.

[7] *Chhandōga* means one studying the Sāmavēda. For the use of this term *vide Manu*, III, 145, and the Baṛukhēra Plate of Harsha, above, Vol. IV, p 211.

[8] *Kataka* may either mean a camp or the capital.

[9] *Vide* my note on the same in Plate No. 4 of the Dāmōdarpur collection, p. 140, above, Vol. XV.

No 24.—SOME IMAGE INSCRIPTIONS FROM EAST BENGAL.

By Nalinikanta Bhattasali, M A , Curator, Dacca Museum

The short votive inscriptions recorded on the pedestals of images are often very useful to the antiquarian in more ways than one   They not only illumine the darkness of the past like flash-lights by furnishing pointed and concise historical information, but the help that they give in determining the periods of sculptural history is by no means inconsiderable   Students of iconography too have reason to welcome them, since many votive inscriptions contain the names of the images on whose pedestals they are inscribed, helping thus to identify them easily. Below I edit six such votive inscriptions from East Bengal, in some of which all the three characteristics noted above will be found to exist to the fullest degree

1. THE BHĀRELLĀ NARTTĒŚVARA IMAGE INSCRIPTION

The worship of images of Natēśa-Śiva (the dancing Śiva) seems to have been a peculiarity of Southern India   Such images in metal abound in Southern India and Ceylon; but they are very rarely met with in the North-Indian Provinces   How Bengal came to share this peculiarity with the Deccan is one of the unsolved problems of history   We must, however, note here that north and west Bengal do not show this peculiarity, and it is only in the south-eastern districts, roughly comprising the ancient divisions of Vanga and Samatata, that images of the dancing Śiva were discovered.   The Dacca Museum has three excellent specimens, while a rather ill-preserved one is to be found in the Rājshāhi Museum [1]   I know of two other very well preserved Natēśa images, which are being worshipped in two villages in the Dacca and Tippera districts of East Bengal

The discovery of so many images of the same class in a rather limited area cannot be accidental, and it is quite possible that their worship was introduced by some Śaiva ruling family. The Sēna kings, whose origin some trace to the Deccan, had their metropolis in Vikramapura in the Dacca district, in the heart of the ancient Vanga, as is attested by the majority of their copper-plates, and they were renowned Śaivas   It is very probable that the worship of Natēśa-Śiva came from Southern India with the Sēnas   It is worth noting that out of the seven images so far discovered and known to me, five came from Vikramapura, and a village situated in the suburbs of the capital of the Sēnas in Vikramapura (a pargana in the Dacca district) contains the ruins of a big temple and is still called Nātēśvara   The present image, however appears to be earlier than the Sēnas

The inscription here edited was found on the pedestal of a huge image of Natēśa-Śiva dug out of a tank in a village called Bhārellā, Police Station Badkāmtā, in the district of Tippera. It was brought to my notice in 1911, and in 1912 I went to Bhārellā too late to save the image, which was broken to pieces by a fanatic Fakir, but I procured the inscribed pedestal for the Dacca Sāhitya Parishat, where it is at present preserved.   A large fragment of the figure of the god is now in the Dacca Museum   I edit the inscription from the original

The inscription is in two lines in four sections on four planed faces of the pedestal, below the lotus-seat of the god   The whole inscribed surface measures in length about 14″, and the letters are approximately ¼ long   The first section has suffered a little by the peeling of the stone, while the beginning of the third and the longest section has been altogether chopped off, damaging altogether 12 or 13 letters of each line   The first line runs connectedly to the end of

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[1] The image was found in the village of Kalikāl under Police Station Lauhajang in the Dacca district.   So it must not be taken as an instance of a find in north Bengal.

the third section and then returns to the first section to begin the second line   The name of the sculptor is given in the fourth section in two lines

The characters used are the ordinary north-eastern characters which gave birth to the modern Bengali script, and which even at this stage show distinct resemblance to the modern script of Bengal   Paleographical considerations would lead us to assign the latter half of the 10th century as the time when this inscription was incised   The date is missing , but it may be that the lost portion of the second line in the beginning of the third section contained a date. There are some data from which a date perhaps is obtainable by mathematical calculation. The image was consecrated on a Thursday, under the star Pushya, on the fourteenth day of the dark half of the month, the day being the 14th of Āshādha counted by the movement of the moon   It would be a very interesting calculation to lovers of astronomical problems to find out in which year or years between 900-1100 A D all these data met   I myself do not possess the necessary equipment for the calculation   Dewan Bahadur L D Swamikannu Pillai who was consulted by Mr. Krishna Sastri on my behalf kindly writes :—

"Between 900 A D and 1000 A D there are three dates which agree perfectly, viz A.D 912, 939 and 983   I have marked these with an asterisk in the accompanying list which shows also dates of less perfect agreement. There must be an equal number between A D. 1000 and A D 1100   We cannot tell which of these dates is meant

Thursday Ashadha, ba 14 Pushya
A.D 905 Th 4 July ; .32 , n f d 75
A D 912 Th 16 July , .09 , 63 *
A D 925 Th 21 July , f d t 52 , f d. n 68
A D 932 Th 5 July ; 52 , f d n. 90,
A D 939 Th 18 July , 41 , .86 *
A D 942 Th 14 July , f d. t 12 , f d n 89.
A D 966 Th 19 July , .71 , f d n 09
A D 969 Th 15 July , f d. t 21 ; f d. n 90.
A.D 983 Th 12 July , 03 , 94 *
A.D 993 Th 20 July , f. d. t .01 , f d. n .30 "

He adds "14th tithi means nothing more or less than 14th day by the movement of the moon. A solar month date would be different, but in a lunar month the days and tithis are the same in the Indian Calendar .In the Muhammadan, Jewish and Greek Calendars there may be a slight difference "

The inscription refers itself to the 18th year of the reign of a king Layaha-Chandra by name   Kings with the surname Chandra are found on the thrones of two adjacent countries, viz Vanga and Arakan   The Chandra kings of Vanga, who, like the Sena and the Varman kings, had their capital in Vikramapura, are known from two copper-plates[1] But no name in their geneology resembles Layaha-Chandra, which sounds indeed rather outlandish. We find an account of the Chandra kings of Arakan in Phayre's *History of Burma*, p 45, and *Numismata Orientalia*, Vol II, Pt I, p. 42, by the same author, where we learn that the dynasty came to an end in 957 A.D. We know of another isolated Chandra king of Vanga, Govinda-Chandra by name, from Rājēndra-Chōla's inscription[2] Layaha-Chandra-dēva must have belonged to one of these three lines   If Layaha-Chandra was of the Arakan line, 939 A. D may be taken as the date of this inscription

[1] *Ep Ind.*, Vol XII, p 136 and *Dacca Review*, Vol II, p 250   Recently a third plate of Śrī-Chandra-dēva was found and edited by me in the *Dacca Review* for May and June 1919, 17 XII. 1919.
Ep Ind, Vol. IX, pp. 232-233.

Ballads, at one time very widely popular are current about a king called Gōvinda-Chandra throughout Bengal One was published by Grierson in J. A. S B, 1873 Another was published by Babu Sib Chandra Sil from Chinsura near Calcutta I published a version by a poet called Bhabānidās, edited from two manuscripts of the song procured from the Tippera district All these versions say that Gōvinda Chandra was the daughter's son of Tilak Chandra king of Mēhārkul which is still a *pargana* of the Tippera district Gōvinda Chandra of Rājēndra-Chōla's inscription and the Gōvinda-Chandra of the ballads appear to have been the same person, and Layaha may have been the name of the father of Tilak Chandra

Kusuma-dēva, whose son Bhāvu-dēva consecrated the image of Narttēśvara, seems to have been a vassal prince under the suzerainty of Layaha-Chandra, ruling over Karmmānta, which I am inclined to identify with modern Baḍkāmtā (the senior Kāmtā), some three miles south-west of the find-place of the image Baḍkāmtā is still a place of considerable importance, being a police station with a big Zemindary kachery, situated within a spacious area surrounded by an ancient moat and containing two big tanks, in the smaller of which many ancient stone images of Brahmanical deities were found Stone images, both Buddhist and Brahmanical, abound in the villages surrounding Baḍkāmtā, and testify to the former prosperity of the tract. The area surrounded by the moat probably indicates the site of the palace The appellation *Dēva* at the end of the names of Kusuma-dēva and Bhāvu-dēva is also in favour of supporting their claims to royal dignity My friend Prof Rādhāgōvinda Bāsak, M A, however, is in favour of taking the word Karmmānta to mean 'a store of grain,' and degrading Kusuma-dēva to the rank of an officer in charge of the royal granary We know that the two plates of Dēva Khadga published by the late Gangamohan Laskar in the Memoirs, A. S B, Vol I, were issued from Jaya-Karmmānta, I have elsewhere tried to show that Karmmānta the capital of the Khadgas and the Karmmānta of the present inscription are identical, and is the present Baḍkāmtā (J A. S B., July 1914)

The language of the inscription is Sanskrit prose throughout As to orthography, we may note the doubling of consonants after *r* as in *karmmānta* (1 1), *sarvvākshara* (1 2), etc, but *chaturdaśyām* (1 1) is spelt with one *d*

Numeral figures for 1 and 4 are used in designating the 14th day of Āshaḍha

The letters of the inscription are mentioned to have been engraved by one Ratōka, but Madhusūdana seems to have been the sculptor who made the image,

TEXT.

Part I

1 [सिद्धिरस्तु¹] श्रीमज्जयहचन्द्रदेवपादीयविजयराज्ये अष्टा[दश * * * * * क]ष्यचतुर्दश्यां
तिथौ वृहस्पति²वारे मुष्यनच्चत्ते कर्म्मान्तपालस्रो-

2 कुसुमदेवसुतश्रीभावुदेवकारितस्रोनर्त्तेश्वरभट्टा[* * * * * *] चन्द्रगत्या
भावाढदिने १४ ॥ खनितञ्च रतोकेन सर्व्वाचर:

Part II.

1 खनितञ्च श्रीमधु-
2 सूटनेमेति ॥

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¹ Expressed by a symbol, see below, p 352,
² Read बृहस्पति.

N B—It is customary to read the auspicious symbol ⟨symbol⟩ or ⟨symbol⟩ in the beginning of an inscription as श्री and this interpretation has been adopted by eminent epigraphists like Hoernle and Fleet   Hoernle writes thus (Intro *Bower Manuscripts, Indian Antiquary* reprint p 22) — " Indian manuscripts or records as a rule commence with some benedictory word, such as *siddham* 'success' or *swasti* 'hail' or with the sacred particle *Om*   The last mentioned is almost universally used at the present day   It may be either written in full or indicated by a symbol. The latter takes the form of a spiral, which may turn either to the right or to the left, and which is probably a conventional representation of the sacred *śarkha*, or conch-shell'   In editing the Mankuwar Stone Image Inscription of Kumāra-gupta, where this symbol is met with for the first time, Dr. Fleet remarks (*Corpus Ins Ind* , p 46, n 3) —" As was usual throughout the whole of the period covered by this volume, this word is represented by a symbol¹, not by letters   *Om* is not of very frequent occurrence at the commencement of Buddhist inscriptions " Thus both the scholars read the symbol as *Om*, but none has advanced any reason for their reading it so   Writing about eight centuries and a half earlier, Al Berum also says the same thing (Vol I, p 173) —" The Hindus begin their books with *Om*, the word of creation, as we begin them with ' In the name of God '   The figure of the word *Om* is ⟨symbol⟩   This figure does not consist of letters, it is simply an image invented to represent this word, which people use, believing that it will bring them a blessing and meaning thereby a confession of the unity of God "   This passage of Al Berum is perhaps responsible for the confident reading of Hoernle and Fleet   But the reading should be reconsidered in the light of the following points —

(*a*) In Bengal, this symbol was largely used in all ancient documents and manuscripts and in teaching alphabets to beginners they were taught to draw this symbol to start with   This custom was prevalent as late as twenty-five years ago, but has disappeared by this time   This symbol was called *āmji* and was supposed to signify the god Ganēśa, the giver of success, being drawn to represent his elephant's trunk   In reading, it was read *Siddhir-astu*

(*b*) In the Gupta inscriptions this symbol only appears in those in which the customary benediction *Siddham* is left out, and nowhere does it appear with it   Consequently it must have stood for *Siddham*, and as time went on it must have become more and more customary to represent the word by this symbol

(*c*) In some inscriptions the symbol is found to precede *Om*, which would never have been the case if the two were identical   In such cases the reading given is *Om Om*, which is certainly not reasonable   Reference may be made to *Epigraphia Indica*, Vol XII, p 8, *Ibid*, Vol XIV, p 159, for examples of the joint use of *Om* and this symbol

In view of these facts, the symbol, I think, should be read *Siddham* or *Siddhir=astu* ¹

TRANSLATION.

Part I

May success attend !   In the eighteenth year of the victorious reign of His glorious Majesty Layahachandra-dēva, on Thursday in the dark Fourteenth Tithi, and under the star Pushya, Bhāvu-dēva, son of Kusuma-dēva, Lord of Karmānta, caused to be made the Lord Narttēśvara   .   . on the 14th day of Āshādha (calculated) by the movement of the moon And all the letters engraved by Ratōka

Part II.

Also engraved by the illustrious Madhusūdana.

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¹ [This seems to be the proper interpretation of the symbol, in spite of Al Berum's statement to the contrary. In the Tamil country the same symbol slightly modified ⟨symbol⟩ is even today called the Pillaiyār-śuli ' Ganēśa's curl' and is first taught to be drawn by children before they begin to learn their alphabet —Ed]

2. THE BĀGHĀURĀ NĀRĀYANA IMAGE INSCRIPTION.

This inscription was brought to my notice in 1912, when I went to Tippera to secure the inscription described in the foregoing pages. Ramānath Chakravarty, a former pupil of mine, whom I met in Comillā, gave me to understand that an inscribed image of Vishnu had been discovered in a village near the Sub-divisional town of Brāhmanbāṛā in the Tippera district and that the local people had been able to read the word Mahīpāla on the inscription. My curiosity was considerably roused to come across an inscription of the Pāla kings so far east from their native home in north Bengal. Pressure of business, however, did not allow me to go after the inscription at that time, and for the next two years I was too busy elsewhere to think of getting at it. Towards the beginning of the year 1914 a friend of mine, Babu Upendrachandra Guha, B A, B T, who is an enthusiast in matters archæological, secured chalked photographs of the inscription and published an article with a reading of it in the local monthly, the *Dacca Review*. The reading, however, was rather defective, and I gave a more correct reading in the next number of the journal. I also published a correct reading of the inscription in the January number of the *J A S B*, 1915 and pointed out its importance.

The image containing the inscription was dug out of a pond some ten or twelve years ago in the village of Bāghāurā near the Sub-divisional town of Brāhmanbāṛā in the district of Tippera. It is now worshipped by a half-crazy woman in the neighbouring village of Vidyākūta. In January 1915 I visited the spot and obtained some excellent photographs of the image, but no amount of persuasion could prevail upon the woman to part with the image.

The inscription purports to be of the third year of king Mahīpāla, presumably **Mahīpāla I** of the Pāla dynasty of Bengal. It records the installation of the god **Nārāyana** in **Samatata**, included in the kingdom of Mahīpāla, by a merchant, **Lōkadatta**, son of **Vasudatta** and hailing from the village of **Bilakīndaka**, in furtherance of the religious merit of himself and parents. Bilakīndaka is in all probability the village Bilākēnduāi, situated close to Bāghāurā.

The importance of the inscription is twofold. First, it definitely settles the position of the kingdom of Samatata. There is no room for doubt now that the village of Bilākēnduāi must have been inside the kingdom of Samatata. Now let us recall what Yuan-Chwang says about Samatata. The pilgrim came to the country of Samatata going 1,200 or 1,300 *li* south of Kāmarūpa. Taking 5 *li* to 1 mile, 1,200-1,300 *li* represent about 250 miles. The country of Samatata was about 3,000 *li* (i e 600 miles) in circuit and bordered on the great sea. The land lay low and was regularly cultivated. Now, if we look round for the country which must satisfy all these conditions and at the same time must include the Brāhmanbāṛā Sub-division of the Tippera district, in which the village of Bilākēnduāi is situated, and if we remember that natural barriers such as mountains and rivers marked off one kingdom from another in those days, we cannot but accept the plain tract of land bounded by the Garo and the Khasi Hills and the hills of Tippera on the north and east, by the Lauhitya, or the old Brahmaputra river, on the west, and by the Bay of Bengal on the south as the ancient kingdom of Samatata. It is a perfectly natural geographical unit with neatly marked boundaries, comprising the eastern half of the present Mymensingh and Dacca districts lying east of the Brahmaputra, the greater part of Sylhet, and the whole of the Tippera and Noakhali districts. The distances between countries recorded by Yuan-Chwang are, in all reasonable probability, distances between the capital towns, and the distance of 250 miles recorded by Yuan-Chwang between Kāmarūpa and Samatata is pretty accurately the distance between Gauhāti and Comillā[1] by any modern route. The circuit of 600 miles is also right and the tract, which is a vast plain, borders on the great sea.

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[1] I am of opinion that Badkāmtā, 12 miles west of modern Comillā, was the ancient capital of Samatata. *Vide* my paper " A forgotten kingdom of East Bengal," *J. A. S B,*, March 1914

There has been much discussion about the situation of the countries of *Shi-li-ch'a-ta-lo Kia-mo-lang-kia*, etc , mentioned by Yuan-Chwang in his account of the kingdom of Samatata , but no satisfactory solution seems to have been arrived at With our present identification of Samatata we may proceed to consider their cases also This is what we find in Beal's edition about them —

" Going *north-east* from this to the borders of the ocean, we come to the kingdom of Srikshetra (Shi-li-ch'a-ta-lo). Farther on to the *south-east* on the borders of the ocean, we come to the country of Kamalanka (Kia-mo-lang-kia) Still to the east is the kingdom of Dvārāpati (To-lo-po-ti) Still to the east is the country of Ishanapura (I-shang-na-pu-lo). These six countries are so hemmed in by mountains and rivers that they are inaccessible."

Now, the pilgrim says that the country of Shi-li-ch'a-ta-lo might be reached by proceeding *north-east* to the borders of the ocean This anomalous statement seems to have puzzled everybody, including Beal and Watters, as the borders of the ocean are never reached by going *north-east* from Samatata, wherever its position might have been in eastern India, and the fact that all the original copies of the Travels available, as well as the biography of the pilgrim, give north-east as the direction, has stood in the way of emending the text to *south-east* My studied opinion is that in spite of the unanimity of all the versions, north-east is a manifest mistake for south-east and the apparent unanimity arises from the mistake having originated in a very early copy of the ' Records ' The very qualifying phrase that the direction would lead to the borders of the ocean is sufficient for the emendation But the emendation is confirmed by the manner in which the succeeding sentences begin The next sentence begins thus,—" *Farther on* to the south-east, etc " and this would lose all force if " south-east " had not been the direction spoken of in the previous sentence If we accept south-east and move from Comillā in that direction to the borders of the ocean, we arrive at a place called at present Chattagram (Eng Chittagong), which was anciently called Śrī-Chattala, a name still frequently used Is there any reasonable objection to identifying Yuan-Chwang's Shi-li-ch'a-ta-lo with Śrī-Chattala of the present times ? It is evident that it satisfies all conditions.

The second importance of the inscription lies in the fact that it throws some light on an obscure part of the history of the Pāla kings of Bengal The Bangarh plate of Mahīpāla I[1] and the Dinājpur pillar inscription[2] inform us that some usurpers drove Vigrahapāla from the throne and that he, after losing his kingdom, took shelter in the eastern country where water abounds (*dēśē prāchi prachurapayasi*) His heroic son Mahīpāla recovered the lost kingdom of his father The two characteristics, water-abounding and eastern, agree well with the present districts which composed the ancient kingdom of Samatata,—so well that it is impossible to suggest any other country which answers equally to the description , and little room is left for doubt that the eastern country alluded to was the kingdom of Samatata The new Bāghaurā image inscription, which is the earliest of the reign of Mahīpāla, finally settles all doubts on the point When we find that Samatata was under Mahīpāla so early as in the third year of his reign, we cannot but conclude that it was Samatata where Vigrahapāla took shelter, suffering reverses in war with the usurper, and leaving north Bengal in the hands of the victor The fact of the earliest inscription of Mahīpāla turning up in Samatata points to his having probably been crowned there and this was perhaps the loyal country used by him as the base of operations in his fight with the usurper for the recovery of his father's kingdom.

The *śloka* in the Bangarh plate which describes Vigrahapāla's sojourn in the eastern country has been copied also in the Āmgāchhi plate[3] of his great-grandson Vigrahapāla III, where,

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[1] J A S B , Vol LXI, pp 77-87 and *Gaudalēkhamālā*, p 91 Also *Ep Ind*, Vol XIV, page 324.
[2] J A S B , 1911, p 615
[3] *Indian Antiquary*, Vol XXI, pp. 97 101.

curiously, it is applied to him. Mr R D Banerji, M A, in his Monograph on the Pālas of Bengal,[1] is inclined to discredit the statements of the *śloka* on this ground When a *śloka* describing some events in the history of a monarch, occurring in a copper-plate of his son, is reproduced in a copper-plate of the great-grandson of that monarch and is applied to that great-grandson, it is presumable that the former application is correct, and the latter plate is (i) either a forgery or (ii) the composition of a very silly panegyrist, who was unaware of the historical significance of the *śloka* and took it only as an attempt at conventional panegyrics, or (iii) the repetition denotes some similar event in the life of the latter monarch.

The inscription is incised under the lotus-seat of a standing image of Nārāyana (Vishnu) about 3' high, between two kneeling figures It is in a perfect state of preservation and is legible throughout without any difficulty. The lines measure each 6" in length and the characters are ⅜" long The characters belong to the North-Eastern variety, specifically called the Kutila character, which gave birth to the Bengali characters of the modern days· The inscription is dated; but the date is given in regnal years It refers itself to the reign of a king called Mahīpāla, presumably Mahīpāla I of the Pāla dynasty of Bengal, Mahīpāla II had a very short and troubled reign, terminating in the successful Kaivarta revolt. As the chronology of the Pāla kings of Bengal is still uncertain, it is difficult to give the exact year of the inscription, but it cannot be far removed from 976 A.D

The language is Sanskrit In orthography, the only point to note is the absence of the *avagraha* sign in *punyayaśo abhi°* (l 4) No distinctive mark of *virāma* is added to 'final consonants There are numerical figures for 3, 2 and 7.

<div align="center">TEXT.</div>

1 [सिद्धिरस्तु]² सम्बत् ३ माघदिने २७ श्रीमद्मीपालदेवराज्ये
2 कीर्त्तिरियं नारायणभट्ट[।]रकाख्या समतटे वि(वि)लकीन्द-
3 कीयपरमवैष्णवस्य वणिक्लोकदत्तस्य वसुदत्तसुत-
4 स्य मातापित्रोरात्मनस्य पुण्ययशोभिवृद्धये³

<div align="center">TRANSLATION.</div>

May success attend. The year three, the 27th day of Māgha In Samatata, in the kingdom of Śrī Mahīpāla-dēva, this meritorious work, namely (the image of) the lord Nārāyana, is of the merchant Lōkadatta, belonging to (the village of) Bilakīndaka—a great devotee of Vishnu—son of Vasudatta, for the furtherance of the spiritual merit and fame of himself and parents.

<div align="center">3. THE KEOĀR VISHNU IMAGE INSCRIPTION.</div>

The inscription was discovered by myself in 1909 That year, in the month of June, I happened to be on a visit to the little village of Keoār, some three miles to the south-east of Rāmpāl, the famous site of the ancient capital of the Sēna kings of Bengal, in the Munshiganj Sub-division of the Dacca district I found the image lying on its face, half buried in earth, and on turning it for inspection, I noticed the inscription The image has now been fixed against the outside wall of the *math* in the same village

The inscription is incised on the pedestal of an image of Vishnu, about 3' in height It is in four lines, each line measuring 7", but the last line is an inch shorter, for want of plane space to write upon The letters are about ½" in height and are everywhere boldly incised

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[1] *Memoirs, A S B*, Vol V, No 3. ²Expressed by a symbol. ³ Read यशोभिवृद्धये

The second couplet has been much injured towards the end by the erosion of the stone, and the several letters could with difficulty be recognized[1]

The inscription is in verse throughout, and consists of two couplets   The language is correct Sanskrit, with only a single exception, which is perhaps an engraver's mistake   The letters belong to the Kutila variety, current in Bengal in the 10th, 11th, and 12th centuries. The inscription is not dated, but paleographical considerations would not possibly allow of an earlier date than the early part of the 13th century A.D.   It records the installation of an image of the lord Vishnu by one Vangōka, great-grandson of Saurisarman, grandson of Pitāmaha and the offspring of the couple Sayōga and Anuyamī

The absence of a royal name in a pretty long inscription is rather remarkable, though by no means uncommon   It may suggest that the inscription belongs to a period when there was no king worth the name to refer to at the time of the installation of the image   There is another fact which confirms this supposition.   The Brāhmana family to which Vangōka belonged is spoken of as hailing from some place in Varēndrī, i e. north Bengal   They must have migrated to Vanga, which included the *pargana* of Vikramapura, the region where the image was found, not long before the installation of the statue, as the fact of their descent from a stock of Varēndrī was, in Vangōka's estimation, still of sufficient distinction to merit a special mention.   The name Vangōka is also significant.   In a family where the first three of the line are named in pure Sanskrit after the sacred names of gods, the naming of the fourth member after the name of a country signifies that he was born just after the family had migrated into that country, and the migration was an important event in the family history

The period at the end of the 12th century A.D. which necessitated the migration of Varēndrī Brāhmanas from north to east Bengal must have been the time when Lakshmanasēna was worsted by Muhammad-bin-Bakhtyar, about 1200 A D, and the old king and his court fled to Vikramapura   Muhammad established his court at Deb-kot, 14 miles south of Dinajpur, in the heart of Varēndrī, and orthodox Brāhmanas must have had a rather hot time of it, necessitating flight to the Vanga country, where the Sēnas still had sway.   The history of the reign of the sons of Lakshmanasēna is very imperfectly known, but erasures of royal names on their copper-plates suggest fratricidal war and consequent anarchy, and the present inscription may well belong to this troublous period.

TEXT.

1 [सिद्धिरस्तु]² चयमानुयमेयेन सयोगाङ्गभुवा विद्युः [।]

2 वङ्गौकेन कृतो विष्णुर्विष्णुसमलोक्यकाम्यया [॥]

3 वरेन्द्रीतटकीयेन माण्डिल्यकुलजन्मना [।] पिताम-

4 हस्य पौत्रेण प्रणसा शौरिशर्मणः ॥

TRANSLATION.

ay success attend ! Longing for a residence in the heaven of Vishnu, this (image of) the Lord Vishnu was consecrated by Vangōka, hailing from [the village of] Tataka in Varēndrī, offspring of the body of Sayōga and (begotten on) Anuyamī, in the race of (the Saint) Sāndilya, grandson of Pitāmaha and great-grandson of Saurisarman.

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[1] I should put it on record here that the assistance of my friend Prof. Rādhāgōvinda Basak, M.A., was of very great use to me in obtaining a correct decipherment and interpretation of the inscription.

² Expressed by a symbol.

Some Image Inscriptions from East Bengal

I   The Bharella Nartesvara Image Inscription of the reign of Layahachandra   the 18th year
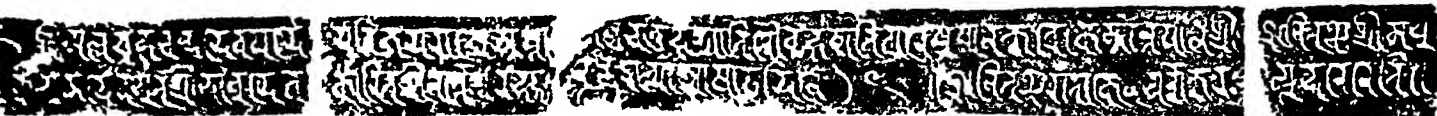
SCALE ONE-HALF

II   The Baghaura Narayana Image Inscription of the reign of Mahi-Pala I   the 3rd year

SCALE TWO-THIRDS

III   The Kewar Vishnu Image Inscription
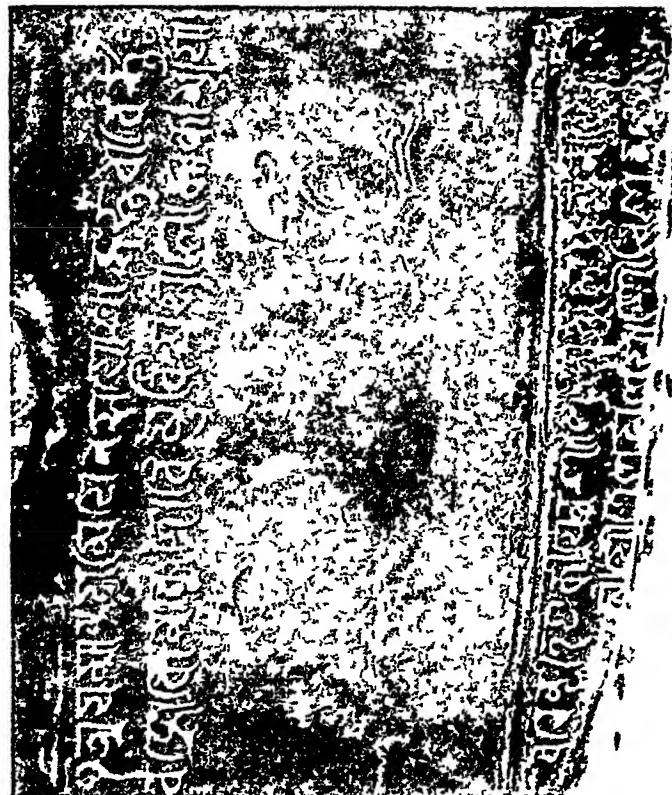
SCALE ONE-HALF

IV   The Deulbadi Sarvani Image Inscription of Mahadevi Prabhavati, Queen of Deva-Khadga
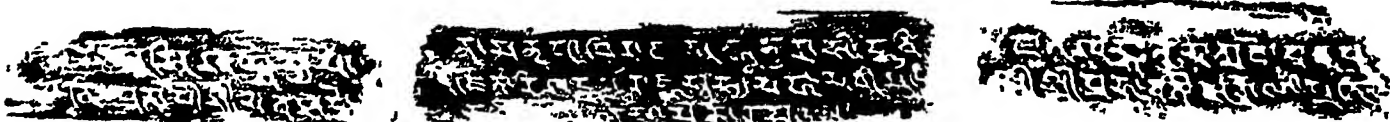
SCALE FOUR-FIFTHS

V   The Dacca Chandi Image Inscription of Lakshmana-Sena   the 3rd year

SCALE TWO-THIRDS

4. THE DEULBĀDĪ SARVVĀNĪ IMAGE INSCRIPTION OF MAHĀDĒVĪ PRABHĀ-VATĪ, QUEEN OF DĒVA-KHADGA.

Deulbādī is a village situated about 14 miles south of Comillā, on the trunk road running from Comillā to Chittagong. The image with which we are dealing was found about two decades ago by one Muhammad Faqir Choudhary, when demolishing the ruins of an ancient structure standing on plot No 447 of the Settlement Map of Jāmmurā, a *mauza* in which the small village of Deulbādī is included, under Police Station Chauddagrāma, in the Tippera district. A fine brass statuette of the sun-god, in which the god is represented sitting inside his one-wheeled car, drawn by seven spirited horses, as well as some brass *lingas*, of which one was inscribed with a short votive inscription,[1] were discovered along with the image of Sarvvānī Babu Taranath Chakrabartti, the then Sub-Inspector of Police in charge of the Chauddagrāma Police Station, secured the images and placed them with one Kailās Chandra Chakrabartti of Deulbādī There the images remained for about sixteen years, until they were bought by Babu Saratchandra Chakrabartti and Babu Nibaran Chandra Chakrabartti of the village Dājdi, Police Station Chāndpur, District Tippera There two brothers are the priests of a temple on the Chandimurā peak of the Lālmāi Hills in the district of Tippera, near the Lālmāi Station on the Assam Bengal Railway As the image installed in the temple of Chandi had long disappeared, these two brothers were anxious to get an image of Chandi for their temple, and they obtained the present image from a cousin of Kailās, who in the meantime had died The image was brought to Comillā along with the other images discovered, and for cleaning they were placed in the care of Babu Maheśa Chandra Bhattāchāryya, a well-known Homœopathic druggist When the images were with Maheśa Babu, the inscriptions on the Sarvvānī image and on one of the *lingas* began to attract attention Babu Anukūlchandra Roy, Manager, Wards' Estates, Comillā, sent me an imperfect rubbing of the inscription on the image. I at once recognized that this was a new inscription of the Khadgas and wrote to Anukūl Babu to that effect With the help of Mr F C French, C S I, I C S, late Commissioner of the Dacca Division and President of the Dacca Museum Committee, I opened negotiations for the acquisition of the image for the Dacca Museum and went over to Comillā and obtained rubbings of the inscription and photographs of the image The owners of the image, after much persuasion by Rai Annadāprasad Sen Bahādur, the Additional District Magistrate, and Mr T Emerson, C.I E, I C S, the then Magistrate of Tippera, consented to part with the image on condition that a duplicate should be made for them and a sum of money given. At this juncture the annual grant received by the Dacca Museum from the Bengal Government was reduced from Rs 6,000 to Rs 3,000 and all ideas of acquiring the image had to be abandoned. The image was taken to the temple at Chandimurā and set up for worship I am informed that it has since been stolen from the temple and lost sight of

The image is of the goddess Sarvvānī, one of the forms of Durgā It is about 20″ in height and rather heavy A portion of the rim of the top towards the proper left is broken away and lost The image is cast in low relief The technique is rather crude, and the pose rigid. The goddess has eight arms, holding on the proper left, from the bottom upwards, the thunderbolt, the bell, the bow and the shield, and on the proper right, from the bottom upwards, the conch-shell, the goad, the sword and the wheel Two maids are on her two sides, holding fly-whisks She stands on a lotus-seat on the back of a couchant lion, with a rather well-executed head. The image was gilt all over with thin sheets of gold, the pious work of queen Prabhāvatī, and the original gilding is still intact in places The white patches in the photograph show where it still clings fast.

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[1] ই[ব*]ষ্কৃবিষ গাচার্ষ্যষ[স*]মৃর্ষ্য.

The inscription refers itself to the reign of a king called Dēva-Khadga of the Khadga line of kings, who ruled over Samataṭa[1] towards the end of the 7th century A D. The existence of the Khadga line of kings in east Bengal became known from the discovery in 1884 of two grants of Dēva-Khadga, evidently the most powerful monarch of the line These two plates were finally edited by the late Babu Gangamohan Laskar, M.A., in the *Memoirs of the Asiatic Society of Bengal*, Vol. I, No. 6

The inscription records the names of three generations of the Khadgas;—Khadgōdyama, the founder of the line, his son Jāta-Khadga and his son Dēva-Khadga. All these names were known from the copper-plate grants of Dēva-Khadga referred to above, and it has nothing new to tell us in this respect. It informs us that Prabhāvatī, queen of Dēva-Khadga, caused the image of Sarvvāṇī to be covered with gold leaves out of reverence for the goddess The name of Prabhāvatī also was known previously, as she figures in one of the plates of Dēva-Khadga as a donor of land to a Buddhist monastery The royal family of Samatata seems to have been of a particularly religious turn of mind Yuan-Chwang states that Śīlabhadra, the head of the University of Nālanda, came of the royal stock of Samatata We can hardly conceive at this distance of time what an exalted position it must have been As the head of the greatest centre of Buddhist culture of the time, he must have occupied the position of the dictator of the then Buddhist world It is probable that he was a Khadga, and those who kept alive the name of Khadgas in later times tried in their way to emulate their illustrious predecessor by noble deeds of piety and benevolence Dēva-Khadga was a donor of land to Buddhist monasteries, and his wife and son also followed in his footsteps, as appears from his grants Yuan-Chwang calls the king of Samataṭa a devout Buddhist and Dēva-Khadga seems very well to merit this appellation The pious soul of queen Prabhāvatī has once again spoken to posterity through the present discovery

The image reveals a curious state of religious belief prevalent in those days Queen Prabhāvatī and the members of her husband's family were all devout Buddhists, but all the same she did not feel it irreligious in any way to pay reverence to a goddess who must have belonged to the Brahmanical pantheon. Harshavardhana, to whose court Yuan-Chwang came, in a similar manner divided his veneration among the Buddha, the Sun-god and Śiva All these clearly show that we must revise our idea of the Buddhists and Hindus of ancient days as two communities shut up in watertight compartments They were more like the present-day Śāktas and Vaishṇavas than otherwise

Asrafpur, near the bank of the old and the real Brahmaputra, the find-place of the two plates of Dēva-Khadga, and Deulbādī, sixty miles south-east, almost at the foot of the hills of Tippera, the find-place of the present image, mark respectively the western and eastern limits of Samataṭa, the kingdom of the Khadgas

The inscribed surface at the base of the image is about 8″ in length, and the characters are approximately ¼″ long They are bigger in the two extreme sections than in the middle one. They are incised pretty deeply and are in an almost perfect state of preservation

The characters belong to the Eastern variety of the Gupta script current in Bengal towards the end of the 7th and the beginning of the 8th century A.D. Mr Laskar, at the time of editing the plates of Dēva-Khadga, assigned them to "the 8th or 9th century A D ", while Mr R. D. Banerji in his Bengali *History of Bengal* is, on paleographical grounds[2] inclined to push the date still further forward. I believe, however, that these Khadga inscriptions cannot be taken farther than the beginning of the 8th century A.D. No one, I believe, can

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[1] *Vide* my paper "A forgotten kingdom of East Bengal," *J A S B* March 1914.
[2] *Vide* also Mr. Banerji's Monograph on "The Palas of Bengal." *Memoirs, A. S B*, Vol, V, No. 3, p 67.

compare the letters of the present inscription, as well as those of the two plates of Dēva-Khadga, with the letters of the Nidhanpur plates of Bhāskaravarman,[1] the Aphsad and the Shahpur inscriptions of Āditya-sēna-dēva, the Deobarnark inscription of Jivita-gupta, the Banskhera and Madhuban plates of Harsha, without coming to the conclusion that a span of about a hundred years covers them all   A comparison of the characters of the Khadga inscriptions with those of the earliest known inscriptions of the Pāla kings leaves no doubt that the former must be considerably prior to the latter, possibly by about a century

There is nothing special to note in the orthography, except the doubling of *v* after *r* in Śarvvāṇī   The use of only one symbol for *b* and *i* is almost the rule in Eastern Indian inscriptions, as in the modern Bengali language

The language is correct Sanskrit verse   The inscription is in three lines on three sections, the first two lines run over all the three sections, while the third line is incised only on the middle one

I edit the inscription from rubbings and photographs in my possession.

TEXT.

1 [सिद्धिरस्तु]² स्वस्ति खड्गोद्यमो नाम नृपाधिराजस्तव्र ...र्णी...वि लातलप: [।*] तदात्मजो दानप-

2 ति: प्रताणी श्रीदेवखड्गो विजिनारिखड्ग. ।[।*] राज्ञस्तस्य मचादेवो महिषी श्रीमप्रभावती [।*] स(म्र)व्वोणीप्रतिमां

3 भक्तया हेमलिप्तामकारयत् । * *

TRANSLATION

May success attend ! May welfare accrue ! There was an overlord of kings, Khadgōdyama by name   His son (became known) on earth (as) Jāta-Khadga   His powerful and benevolent son Dēva-Khadga was (like) a sword, a conqueror of all foes   Prabhāvatī, the queen-consort of this king, out of reverence for Śarvvāṇī, covered her image with gold

5. THE DACCA CHANDĪ IMAGE INSCRIPTION OF THE 3RD YEAR OF LAKSHMAṆA-SĒNA-DĒVA.

The inscription is on the pedestal of an image of Chandī, discovered about four decades ago in the ruins of Rāmpāl, the site of Śrī Vikramapura, the capital of the Sēnas referred to in their land grants, in the *pargana* that still goes by the same name, included at present in the Dacca and Faridpur districts   It is at present worshipped in a small temple situated in the Dālbāzār quarter of Dacca on the Farāshganj Road, a little to the east of the Northbrook Hall   The late Babu Baikunthanāth Sēn, Deputy-Inspector of Schools, of Sonārang, District Dacca, was an enthusiastic collector of images, quite a crop of which used to turn up every year in the course of casual excavations in and around Rāmpāl   These, on discovery, were usually put under a tree by a roadside to receive the chance worship of the passers-by   Sometimes they were put to altogether unholy uses and sometimes consigned again to neglect and oblivion   It does great credit to Baikuntha Babu that he alone, amidst the general callousness of his countrymen was alive to the artistic and archæological merit of these relics of the past, and not a few of them owe their safe preservation to his labour   Many pieces of his collection are, it is gratifying to note, now in the Dacca Museum   This inscribed image of Chandī was one of Baikuntha Babu's finds, and he must have presented it to the founder of the temple in which it at present lies.

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[1] *Ep Ind*, Vol XII, p. 65   ² Expressed by a symbol.

The inscription, however, seems to have aroused little interest at the time of the discovery, and its existence was unknown to the gentry of Dacca In April 1911 Mr R D Banerji, M A., of the Archæological Survey, and some friends discovered it, and from that time it has been known to the public.

In August 1911 Mr Banerji published a reading of this inscription in the Bhadra, 1318 (B S), number of the *Pratibha*, the journal of the Dacca Sahitya Parishat in an article on king Lakshmana-sēna of Bengal Four months later, in the Pausha number of the same journal, in a long article on the Sēna kings of Bengal, I gave my reading of the inscription In June 1912 I published the inscription, with a half-tone reproduction of both the inscription and the image, in the *Dacca Review*, in an article on the era of king Lakshmana-sēna In *J A S B*, July 1913 Mr Banerji re-published it in his article on king Lakshmana-sēna The inscription has thus been published four times, yet it cannot be said that up to this time it has been properly edited Mr. Banerji's reading in the *J A S B.*, as well as his description of the image, is not free from mistakes.

The image is about 30" high and is a rather fine example of Bengal sculpture of the time of the Sēnas The goddess has four arms and she stands in a graceful *tribhanga* pose on a full-blown lotus over a couchant lion. Her upper left hand holds a bunch consisting of a half-blown lotus with some buds and leaves The lower left hand holds an ornamental basket-like thing, either a flower basket or a waterpot The upper right hand holds an elephant-goad and the lower one is in the *Varada-Mudra*. Two attendant female figures stand on the two sides of the goddess, and two elephants are pouring water over her from two pitchers She seems to be a curious mixture of Gaja-Lakshmī and Chandī and may represent the Śakti of the god Harihara

The inscription is in an excellent state of preservation The inscribed surface is about 9½" in length, and the characters are approximately ¼" high. The characters may be called Bengali characters of the 12th century A D They are not very well executed and are far inferior in execution to those of the Deopara inscription of Vijaya-sēna They may be compared in style and coarse execution to the Buddha Gaya inscription of Asōkachalla-dēva executed in the 51st *atīta-rājya* year of Lakshmana-sēna-dēva (*Epigraphia Indica*, Vol XII, p 29) In this connection I may lay stress on a fact which is sometimes forgotten Printed types have accustomed us to a standard; but in ancient times contemporary inscriptions varied as much in style as handwritings, because the inscriptions were always written with ink or lac on the surfaces to be inscribed and were then engraved by sculptors who were not always literate

The inscription refers itself to the third year of the era of king Lakshmana-sēna of the Sēna dynasty of Bengal As the era has been proved to have begun in 1119 A D,[1] the inscription must have been incised in the year 1121 A.D It records that *Adhikrita* Dāmōdara, son of Māladatta, began the image of Chandī in the third year of the era of Lakshmana-sēna and that his relative (younger brother?) Nārāyana installed the image in the fourth year The inscription is in two lines on three sections I edit it from the original stone The language is incorrect Sanskrit *Suta* and *adhikrita*, which should have been in the 3rd case according to grammatical rules, are both used in the 1st case

<div align="center">TEXT.</div>

1 श्रीमल्लक्ष्मण- ज्ञाल्दे(द)त्तसुत अधिक्षात श्रीदासोदरे- श्रीनारायण्डन

2 सेनदेवस्य सं ३- ण श्रीचर्खींदेवी समारब्ध तङ्खादकना-प्रतिष्ठितेति ४ ॥

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[1] *Indian Antiquary,* Vol XIX, p 1.

Note on the reading

The decipherment of this short inscription presents some very serious difficulties. The fourth letter in what I have read as *Māladetta* is very curious   It bears little resemblance to any letter or compound used in the inscriptions of the time   Mr Banerji has read it as *Malade-i*, but certainly *tta* it is not like any *i* hitherto met with in the inscriptions of the period   It has moreover no perpendicular straight stroke to the proper left, distinctive of an *i* of the period   The following additional objections to the reading may be advanced —

(i) *Maladei* must be a Prākṛit form of Mūla-dēvī, and it is not easy to understand why a Prākṛit word should be used in a Sanskrit inscription

(ii) The use of only the mother's name to denote parentage is unusual in a North Indian inscription.

The letter that one would expect here is *va*, reading the name as Māladēva, but the letter used does not bear the slightest resemblance to the *va* of the period or any of the *va*'s used in this inscription   Then what is this letter ?   My reading of the letter as *tta* is only conjectural, based on the principle of greatest resemblance and   possibility and on a surmise which I shall advance presently.   [Perhaps we should read *Mālā-khadga* —Ed]

The second difficulty is about the reading of the name of the donor   Mr. Banerji has read it as *Dāmōdrēna*, but *ē* is clearly absent from *dra*.   We can read it at best *Dāmōdrana*, which is inadmissible   I have read it *Dāmōdarēna*, which is admittedly the correct form of the word   It should be noted that the *ā* mark of *nā*, the letter below *dra*, is projected upwards to a considerable distance   I believe the engraver wrote *Dāmōdana* through mistake and attempted to put in *re* between *da* and *nā*   Want of space stood in his way, and he fared very ill. The projection of *ā* of *nā* should, in my opinion, be taken for the engraver's attempt to make a small *ra*, and the *r* mark of *Dāmōdra* should be taken as the *ē* he tried to make.   I have thus read *rē* between *da* and *nā*.

The next difficult word is what I have read as *tad-bhrādakanā*   Mr Banerji read it as *tabhrūdakana*, which gives no meaning whatever, and which moreover is incorrect, as *na* has a clear *ā* after it   The word must be a qualifying word of *Nārāyanēna*, which follows it, and consequently must be in the 3rd case.   It is also expected that the word should signify some sort of relationship between the   donor and the founder, whose names prove them to have been close relatives.   I have therefore read the word as *tad-bhrādakanā* and would translate it as " by his younger brother "   The word *bhrādakana*, again, is perplexing and new.   I can suggest nothing better than that it was an irregular East-Indian compound of the two words *bhrātā* and *kanīyān*

Now, Dāmōdara was evidently a high officer of the state, and we may expect to see his younger brother too in a similar position   We know from the Tarpandighi plate of Lakshmana-sēna[1] that one Nārāyana-datta was his minister of peace and war   Can this Nārāyana-datta be the Nārāyana of the present inscription ?   Māla is an appellation of Vishnu, and the names Nārāyana and Dāmōdara are also   names of Vishnu   It was evidently a Vaishnava family and the name of the father agrees well with the names of his sons   If our conclusions, which are based on a series of surmises, are right, and if Nārāyana of the present inscription can be identified with Nārāyana-datta, the minister of peace and war of Lakshmana-sēna, we may read the name of Dāmōdara's father as Māladetta and emend it to Māla-datta by taking the *e* of *de* as an engraver's mistake

Mr Banerji read a *visarga* after *iti*, which is inadmissible , it should be read as *4*, resembling the modern Bengali symbol for 4   It is not usual to put the two ciphers of a *visarga* in touch with one another as has been done in the present case

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TRANSLATION.

The year 3 of the era of the illustrious Lakshmana-sena-deva The (image of the) goddess Chandī was begun by the Superintendent (*Adhikrita*) Dāmōdara, son of Māladatta and was installed by his younger brother Nārāyana (in the year) 4

No 25 —A NOTE ON THE VAKATAKA INSCRIPTION FROM GANJ

(*No 4 of Vol. XVII of the Epigraphia Indica*)

BY K N DIKSHIT, M A, POONA

The last four paragraphs of the article on 'a Vakataka inscription from Ganj' illegible correction in the light of information available from the Poona plates of the thirteenth year of the Vākātaka queen Prabhāvatiguptā (*Ante* Vol XV, p 32 ff) and another grant of the 19th year of Pravarasēna (II) issued by the same queen Prabhāvatiguptā (*Ind Ant* Vol LIII, page 48). The characters used in the Ganj and Nachna inscriptions are later in date than those of the Poona plates of Prabhāvatiguptā The Prithvīshēna of these inscriptions is therefore more likely to be identified with Prithvīshēna II of the Bālāghāṭ plates, who was the great-grandson of Prabhāvatiguptā and not with Prithvīshēna I her father-in-law. On palaeographical grounds, Prof Jouveau-Dubreuil attributes the Nachna inscriptions to the fifth century instead of the 4th and to Prithvīshēna II, in preference to Prithvīshēna I (Ancient History of the Deccan, page 73) The present epigraph which is almost identical with the Nachna inscriptions, can therefore also be assigned to Prithvīshēna II who must have lived in or about the last quarter of the 5th or the opening years of the sixth century A.D

INDEX.[1]

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[1] The figures refer to pages n after a figure, to footnotes, and add. to the additions on pp vii to xiii. The following other abbreviations are used:—ch =chief , co =country; di.=district or division, do =ditto, dy =dynasty, E = Eastern, f =female, k =king; m.=male, mo =mountain, ri =river, s a =same as, sur.=surname, te =temple, vi =village or town, W =Western

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